2016

Essays on reducing vulnerability of tourism destinations to unpredictable crises

Homa Hajibaba
University of Wollongong

University of Wollongong

School of Business

Essays on Reducing Vulnerability of Tourism Destinations to Unpredictable Crises

by

Homa Hajibaba

A thesis submitted as part of

the requirements for the award of the degree of

Doctor of Philosophy

in

Marketing

2016

Declaration

I, Homa Hajibaba, declare that this thesis, submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Business, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Homa Hajibaba
22/08/2016

Abstract

Tourism destinations are vulnerable to the occurrence of unpredictable critical events. Critical events range from natural to human-induced events and are increasing in number. Tourism destinations are vulnerable because unpredictable critical events cause drops in tourism demand. Drops in tourist numbers lead to loss of revenue for the affected destinations and negatively impact on tourism businesses and the local community. Therefore, developing strategies to reduce the vulnerability of tourism destinations to crises is critical.

Despite a growing body of work on tourism crisis management, little research has focused on developing marketing strategies towards developing resilience. Previous research introduces measures to strengthen tourists' confidence to travel following a critical event. However, much of this work is descriptive in nature. The tourism crisis management literature highlights the importance of collaboration of different tourism stakeholders. Yet, no study has investigated involvement of residents in tourism crisis management.

The current PhD research consists of a number of studies. The first study proposes targeting tourists who are more resistant to crises as a proactive strategy to reduce crisis-vulnerability of tourism destinations. Results of the first study indicate that crisis resistant tourists exist and have distinct characteristics which can be used for targeting them. Results from a second study – which investigates the effectiveness of measures that destinations can take to prevent cancelations – show that the effectiveness of measures varies across different kinds of crises and tourists. In a third study, the potential of peer-to-peer networks to help out in times of a crisis hitting a tourist destination is investigated. Results indicate that residents of tourism

destinations are willing to help in times of crisis by opening up their homes and accommodating tourists, especially in the initial emergency situation. There is also evidence of tourists being willing to accept such offers made by residents.

Overall it can be concluded from all studies conducted as part of this PhD that tourism destinations can adopt a range of strategies to protect themselves from demand drops following crises. The identified strategies have the potential to help tourism destinations to be more resilient. Targeting crisis-resistant tourists and shaping networks of supportive residents to help with the provision of effective prevention measures are strategies which can reduce and possibly prevent negative consequences of tourism crises.

Acknowledgements

I sincerely thank my PhD supervisor Prof. Sara Dolnicar for her support, encouragement, and for her inspiring guidance throughout the course of my PhD. I thank Prof. Tim Coltman for his support and for his feedback on my PhD manuscripts. I am grateful to Prof. Fredriech Leisch, Dr Bettina Grün, Dr Amata Ring and Dr Dominik Ernst for all their generous help. I would also like to thank Maree Horne for her organizational support.

Special thanks go to my friends who contributed to a more pleasant PhD life: Nazila, Karen, Chelsea, Logi, Anja, Cole, Nazim, Anahita, and Romina. Thank you Jing for our wonderful friendship. Thank you Leyla, Maryam and Nastaran for all your support and true friendship during years.

I am grateful to my family for their warm support: my sisters (Maryam, Hourieh and Mahnaz), my brother-in-law (Abolfazl), and my mother-in-law (Sakineh). My deepest gratitude goes to my parents (Najmeh and Aliasghar) for their love, support, and encouragement throughout my life.

I dedicate this thesis to my husband, Mojtaba, who has always given me his unconditional love and support.

The style of thesis

The current thesis is prepared in journal article compilation style format.

Publications during PhD candidature

Published journal articles	Contributors	Overall contribution
1. **Hajibaba, H.**, Gretzel, U., Leisch, F., & Dolnicar, S. (2015). Crisis-resistant tourists. *Annals of Tourism Research*, 53, 46-60.	Homa Hajibaba Ulrike Gretzel Friedrich Leisch Sara Dolnicar	62% 12% 3% 23%
2. **Hajibaba, H.**, Boztuğ, Y., & Dolnicar, S. (2016). Preventing tourists from canceling in times of crises. *Annals of Tourism Research*, 60, 48-62.	Homa Hajibaba Yasemin Boztuğ Sara Dolnicar	67% 25% 8%
3. **Hajibaba, H.**, Karlsson, L., & Dolnicar, S. (in press). Residents open their homes to tourists when disaster strikes. *Journal of Travel Research*. doi: 10.1177/0047287516677167	Homa Hajibaba Logi Karlsson Sara Dolnicar	83% 12% 5%
4. Rintoul, D., **Hajibaba, H.**, & Dolnicar, S. (accepted on 8 August 2016). Comparing association grids and pick-any lists for measuring brand attributes. *International Journal of Market Research*.	Duncan Rintoul Homa Hajibaba Sara Dolnicar	60% 15% 25%

Journal articles under review	Contributors	Overall contribution
1. **Hajibaba, H.**, & Dolnicar, S. (under review). Tourists' advice on how to prevent them from canceling. (Research Note)	Homa Hajibaba Sara Dolnicar	82% 18%
2. Rintoul, D., **Hajibaba, H.**, & Dolnicar, S. (under review). Why animating yes-no questions in web surveys does more harm than good. *International Journal of Market Research.*	Duncan Rintoul Homa Hajibaba Sara Dolnicar	60% 15% 25%
Published book chapter	Contributors	Overall contribution
1. **Hajibaba, H.**, & Dolnicar, S. (2016). Drivers of trip cancellations among Australian travelers. In M. Kozak, & N. Kozak (Eds.), *Tourist behavior: An international perspective* (pp. 97-105). UK: CABI.	Homa Hajibaba Sara Dolnicar	82% 18%
Published articles in refereed conference proceeding	Contributors	Overall contribution
1. **Hajibaba, H.**, Grün, B., & Dolnicar, S. (2016). Variable selection for market	Homa Hajibaba Bettina Grün	50% 30%

segmentation. *Council for Australasian Tourism and Hospitality Education (CAUTHE)*, Sydney, Australia, 8-11 February (Working Paper).	Sara Dolnicar	20%
2. **Hajibaba, H.**, & Dolnicar, S. (2015). What drives trip cancellations when a disaster hits? *Council for Australasian Tourism and Hospitality Education (CAUTHE)*, Gold Coast, Australia, 2-5 February.	Homa Hajibaba Sara Dolnicar	82% 18%

Publications included as part of the thesis

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1. **Hajibaba, H.**, Gretzel, U., Leisch, F., & Dolnicar, S. (2015). Crisis-resistant tourists. *Annals of Tourism Research*, 53, 46-60.	Homa Hajibaba Ulrike Gretzel Friedrich Leisch Sara Dolnicar	62% 12% 3% 23%
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Chapter 1:

Introduction

Introduction

Tourism is an economically important industry contributing to 9.8% of 2015 global GDP and supporting one in 11 jobs in the world (The World Travel & Tourism Council, 2016). Countries around the world are under constant threat of crises such as political and natural crises. Tourism industry is vulnerable to such unforeseen crises. In 2015 alone, countries including Egypt, France, Indonesia, Kenya, Nigeria, Thailand and Tunisia experienced terrorist attacks which negatively influenced global tourism as well as tourism in these countries (The World Travel & Tourism Council, 2016).

Critical events adversely influence tourists' perceptions of the affected destinations. Despite discrepancies between objective risks and travelers' perceived risks (Sönmez & Graefe, 1998b), risk perceptions lead to travel cancelations and demand drops. Travel cancelations and demand drops can have a devastating effect, especially on regions heavily dependent on tourism. For example, tourism contributed 11.5% to Egypt's 2010 GDP (World Tourism Organization, 2011). Political tensions in Egypt led to a 45% drop in international tourist arrivals in the first quarter of 2011 (World Tourism Organization, 2011). Prolonged political instability caused a greater than 50% drop in international tourism revenue, from nearly US$13 billion in 2010 to US$6 billion in 2013 (World Tourism Organization, 2015).

In addition to the negative impact on perceptions, critical events such as natural disasters can damage tourism infrastructure. When infrastructure is damaged, the destination cannot accommodate tourists, further reducing tourist numbers. For example, the 2011 Christchurch earthquake damaged two-thirds of tourist accommodations (Orchiston & Higham, 2016). Slow progress with accommodation

repairs meant that the city could not accommodate tourism demand (Christchurch & Canterbury Tourism, 2012). The earthquake caused a 40% drop in total guest nights and a loss of NZ$235 million in visitor expenditure (Orchiston & Higham, 2016).

Given the major socioeconomic impact of crises on communities (especially those reliant on income from tourism), destinations' vulnerability to crises needs to be reduced (Ritchie, 2008). The overarching goal of the current PhD thesis is to identify strategies which could be used to reduce the vulnerability of tourism destinations to unpredictable critical events. Tourism destinations are vulnerable to crises mainly due to demand drops and cancelations following crises (Sönmez, Apostolopoulos, & Tarlow, 1999). Therefore, the current PhD research specifically investigates ways to reduce drops in demand and cancelations. The focus is not only on reactive response and recovery but also on proactive strategic planning.

Unlike previous research which mainly focuses on the supply side, this PhD research primarily takes a demand-side perspective to crisis management in tourism. A demand-side perspective requires insights about tourists' preferences and the translation of those insights into crisis management strategies (Zhou, Brown, & Dev, 2009). To achieve the overarching goal of the present PhD research, the following research objectives are addressed:

Research objective 1: Theoretically conceptualize and empirically test the existence of crisis-resistant tourists.

> Chapter 3 investigates a strategic way of protecting destinations from the negative demand consequences from critical events: that of identifying and actively targeting tourists who are resistant to crises. Crisis-resistant tourists are defined as those who do not cancel. Instead they continue with their travel

plans despite facing a crisis at their planned destination. If there is evidence of the existence of such tourists, destinations can select them as a target market to reduce their vulnerability to crises in future.

Research objective 2: Understand the comparative stated effectiveness of alternative cancelation prevention measures across kinds of crises and tourists.

Destinations facing a crisis need to take measures to prevent cancelations. Cancelation is operationalized as the abandoning of travel plans. Several possible prevention measures destinations can use have emerged from prior work. A qualitative study – in Chapter 4 – directly asks tourists what measures would prevent them from canceling their trip when faced with a crisis. The comparative stated effectiveness of the identified measures – from the qualitative study and the literature – is examined in a quantitative study in Chapter 5. For this purpose, the stated effectiveness of different prevention approaches is investigated across crises and tourists. Using effective prevention approaches in a specific kind of crisis and directing them at the most appropriate segment of tourists would reduce cancelations and demand drops which in turn would reduce crisis-vulnerability of tourism destinations.

Research objective 3: Understand the role of residents in destination recovery.

Residents are important tourism stakeholders. However, to date, the role residents could play in the recovery of tourism destinations struggling with a crisis has not been studied. Chapter 6 investigates if and how residents can help tourism industry by providing effective prevention measures – identified in Chapter 5. Chapter 6 further investigates if support from residents affects tourists' decision to cancel or not to cancel their trip. Involving residents in

emergency and recovery activities is critical especially when infrastructure is damaged because residents can help make huge amounts of accommodation space available.

To address the above research objectives, a post-positivist research paradigm is adopted. Post-positivism assumes the existence of a single reality and that knowledge is the attempt to approximate reality and get as close to truth as possible (Lincoln, Lynham, & Guba, 2011). Post-positivism supports combining qualitative and quantitative methods (Henderson, 2011) but has a preference for the quantitative methodology with an emphasis on causal explanation and recognition of the complexity of social causalities (Greene & McClintock, 1991). Qualitative and more dominantly quantitative approaches are, therefore, employed: the qualitative approach is used to explore – possibly unknown – factors playing role in tourists' decision making, and the quantitative approach to examine the effect of – identified – factors on tourists' decision making using large samples and statistical analysis to increase generalizability (Lincoln et al., 2011).

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Chapter 2:

Literature Review

The theory of perceived risk is a fundamental concept in consumer behavior research. Risk perceptions affect tourists' decision making (Roehl & Fesenmaier, 1992; Sönmez & Graefe, 1998b). Destinations in crisis are rejected due to negative perceptions or perceived risks (Sönmez & Graefe, 1998b). Understanding tourists' risk perceptions is crucial for effective crisis management.

This chapter provides a review of literature on the theory of perceived risk. Risks perceived by consumers when buying a product or service and the factors affecting perceptions of tourism consumer will be discussed. Then, the concept of crisis and more specifically a tourism crisis will be defined. The literature on tourism crisis management and strategies for preventing or minimizing the effects of a tourism crisis will be reviewed. Next, the knowledge gaps and research questions will be discussed.

Risk perceptions

Bauer (1960) introduced the notion of perceived risk to consumer behavior research more than five decades ago. Perceived risk in consumer research refers to the situation where a consumer as a decision maker does not have knowledge about the consequences of the purchase alternatives (Dowling, 1986). The consumer, thus, views the purchase decision as risky. According to Mitchell (1999), lack of information and a semi-reliable memory make it impossible for an average consumer to accurately assess risk. Therefore, subjective (perceived) risk – rather than objective risk – affects consumer behavior (Mitchell, 1999).

Any purchase decision involves various risk components including equipment risk component, financial risk component, physical risk component, psychological risk

component, satisfaction risk component, social risk component, and time risk component (Cheron & Ritchie, 1982; Kaplan, Szybillo, & Jacoby, 1974; Peter & Tarpey, 1975). According to the theory of perceived risk, consumers prefer the alternative with the lowest perceived risk when making a purchase decision (Mitchell, 1992). Some actions or devices can be used by the buyer or seller as risk relievers. For example, guarantees act as risk relievers because they reduce the severity of financial loss in case of purchase failure (Roselius, 1971; Shimp & Bearden, 1982). Information search before the purchase is another risk-reduction strategy that decreases the probability of purchase failure (Mitchell, 1992; Roselius, 1971). Consumers engage in both passive (TV advertisement) and active (ask family and friends) information search about their purchase from formal (advertising) and informal (family and friends) sources (Mitchell, 1992).

Bettman (1973) divides perceived risk into inherent and handled risk. Inherent risk is the risk a product category holds for a consumer. Handled risk is the amount of conflict the product category arouses when the consumer chooses a brand from a product class (brand level risk). According to Mitchell (1999), information acquisition and risk-reduction processes turn the inherent risk to handled risk. Consumers also use risk relievers after the purchase to reduce their dissatisfaction resulting from the mismatch between their expectations of the product and the product's perceived performance (Mitchell, 1992). For example, they may look for information supporting their purchase decision (Mitchell, 1992).

Cheron and Ritchie (1982) and Zeithaml (1981) argue that risk perceptions for physical goods differ from risk perceptions for services. Because of the main characteristics of services (intangibility, heterogeneity, perishability and

inseparability), consumers perceive more risk when buying a service than when buying a product (Mitchell & Greatorex, 1993; Murray & Schlacter, 1990). Tourism consists of services that are produced and consumed simultaneously. This co-creation makes it hard to standardize tourism products; therefore, tourists' perceived risk is high (Roehl & Fesenmaier, 1992; Zeithaml, 1981).

According to Roehl and Fesenmaier (1992), travel risk perceptions involve seven risk dimensions: equipment risk (the possibility of mechanical, equipment or organizational problems during vacation), financial risk (the possibility that the travel experience will not provide value for the money spent), physical risk (the possibility of physical danger, injury or sickness during vacation), psychological risk (the possibility that the vacation will not reflect the tourist's personality or self-image), satisfaction risk (the possibility that the travel experience will not provide personal satisfaction), social risk (the possibility that the vacation will affect others' opinion of the tourist), and time risk (the possibility that the vacation will take too much time or waste time).

In addition to the above risk dimensions, literature suggests other risk factors associated with tourism including risks to one's health, the risk of political instability, and the risk of terrorism (Dolnicar, 2005; Lepp & Gibson, 2003; Seddighi, Nuttall, & Theocharous, 2001; Sönmez, 1998; Sönmez et al., 1999; Sönmez & Graefe, 1998a, 1998b). Health risk is the possibility of becoming sick while on vacation (e.g. exposure to an epidemic). Political instability risk is the possibility of becoming involved in political turmoil at the destination. Terrorism risk is the possibility of involvement in a terrorist act (Sönmez & Graefe, 1998a).

A range of internal factors have been identified to influence tourists' risk perceptions: socio-demographic factors including gender, age, education, and income (Floyd & Pennington-Gray, 2004; Gibson & Yiannakis, 2002; Kozak, Crotts, & Law, 2007; Lepp & Gibson, 2003; Mitchell & Vassos, 1998; Sönmez & Graefe, 1998b); psychographic factors including personality traits and travel motivations (Lepp & Gibson, 2003, 2008; Reisinger & Mavondo, 2005); culture and nationality (Kozak et al., 2007; Mitchell & Vassos, 1998; Reisinger & Mavondo, 2005, 2006; Seddighi et al., 2001); and behavioral factors such as past travel experience (Kozak et al., 2007).

In terms of socio-demographic factors: tourists who perceive higher risks associated with travel are more likely to be younger, female, unemployed or employed part-time (Floyd & Pennington-Gray, 2004; Kozak, Crotts, & Law, 2007; Lepp & Gibson, 2003; Sönmez & Graefe, 1998b). Higher levels of education and income are associated with lower degrees of concern for safety (Sönmez & Graefe, 1998b). A gender/cultural analysis of perceived risk (Mitchell & Vassos, 1998) shows that Cypriot males perceive less risk than Cypriot females and British respondents perceive less risk compared to Cyprian respondents. Further, tourists who are less likely to change their travel plans when facing a risky situation are from risk-tolerant cultures (Kozak, Crotts, & Law, 2007). Tourists with higher international travel experience perceive less degrees of travel risk (Lepp & Gibson, 2003; Sönmez & Graefe, 1998b).

In addition to internal factors, external factors such as the occurrence of natural disasters at tourist destinations affect tourists' risk perceptions (Sönmez et al., 1999). Constant media reports of critical events intensify risk perceptions which might differ from real risk (Chew & Jahari, 2014). It is the perceived risk (travelers' own

perceptions) rather than the objective risk (whether a destination or region is really safe or risky) that affects travel decisions (Sönmez & Graefe, 1998a).

Tourists generally choose to travel to destinations with the least perceived risk (Law, 2006; Sönmez & Graefe, 1998b). The occurrence of critical events followed by mass media coverage exacerbates tourists' risk perceptions of their planned destination which affects tourists' decision making (Sarman, Scagnolari, & Maggi, 2015; Seddighi et al., 2001; Sönmez & Graefe, 1998b).

When faced with a risky situation, some tourists stick to their travel plans and absorb the risks involved (Roselius, 1971). Others turn the inherent risk to handled risk by engaging in risk reduction strategies (Uriely, Maoz, & Reichel, 2007) such as buying travel insurance and acquiring information from travel agents, friends, and family (Mitchell & Vassos, 1998; Moutinho, 1987). Another risk reduction strategy for tourists is to change the time and location of their trip (Kozak et al., 2007; Valencia & Crouch, 2008). Inevitably some will also choose to cancel their travel (Fischhoff, De Bruin, Perrin, & Downs, 2004; Valencia & Crouch, 2008). Tourists' reaction to critical events can turn into a tourism crisis and threaten the affected destination's entire tourism industry (Sönmez et al., 1999).

Crisis defined

There is no one universally accepted definition of a crisis (Coombs, 2015). Coombs (2015, p. 3) provides the following definition: *"A crisis is the perception of an unpredictable event that threatens important expectancies of stakeholders related to health, safety, environmental, and economic issues, and can seriously impact an organization's performance and generate negative outcomes."*

Some types of crises that businesses face include product-harm crises and adverse international events (Meyers & Holusha, 1986). Product-harm crises are among the most common threats to a company (Dawar & Pillutla, 2000). Product-harm crises are situations where products are found to be defective or even dangerous (Dawar & Pillutla, 2000). Product-harm crises affect quality perceptions, tarnish the company's reputation, cause major loss of revenues, and damage brand equity (Van Heerde, Helsen, & Dekimpe, 2007).

According to Sönmez et al. (1999), in the tourism context, a crisis is the ensuing of negative publicity after the occurrence of a critical event. Sönmez et al. (1999, pp. 13–14) define a tourism crisis as: *"[an occurrence] which can threaten the normal operation and conduct of tourism-related businesses; damage a tourist destination's overall reputation for safety, attractiveness, and comfort by negatively affecting visitors' perceptions of that destination; and, in turn, cause a downturn in the local travel and tourism economy, and interrupt the continuity of business operations for the local travel and tourism industry, by the reduction in tourist arrivals and expenditures."* The present thesis adopts the definition by Sönmez et al. (1999). A crisis or a disaster is considered as an occurrence of a critical event which leads to a drop in tourist numbers and consequently a downturn in the local tourism industry.

Dropping visitor numbers fuel tourism crises (Sönmez et al., 1999). The occurrence of critical events at tourism destinations causes drops in tourist numbers which can be due to the lack of demand or the lack of supply as a result of the damage to tourism infrastructure (Orchiston & Higham, 2016). Some critical events such as natural disasters can cause significant damage to tourism infrastructure. In such situations, even if tourists decide to travel, lack of supply can result in travel

cancelations and demand drops until the damaged infrastructure is rebuilt. For example, the damage to transportation and accommodation infrastructure following 2011 Christchurch earthquake and the long rebuilding timeframe deterred tourism recovery (Orchiston & Higham, 2016).

The tourism literature identifies both human-caused and natural-caused critical events as having the potential to negatively affect the tourism industry (Faulkner, 2001; Sönmez et al., 1999). Human-caused crises include riots, terrorism, crime, political instability (Hobson & Ko, 1994), and war. Natural-caused crises include hurricanes, earthquakes, and volcanic eruptions. Although the timing of a crisis event occurring is usually unpredictable, the likelihood of that crisis event occurring can be estimated, especially in the case of natural disasters.

The major consequence of both human-caused and natural-caused crises is the negative impact on visitor numbers for the affected tourism destination (Santana, 2004). Examples of human-caused and nature-caused crises with their consequences on tourism destinations are provided below.

One example of a human-caused tourism crisis is the Bali bombings in October 2002. This crisis led to a drop of more than 40% in international tourist arrivals (Hitchcock & Putra, 2005). Local tourism businesses were negatively affected. Hotel occupancy rates decreased dramatically (Henderson, 2003; Hitchcock & Putra, 2005). The tourism industry estimated a loss of US$ 1.8 billion from international tourism (Henderson, 2003).

The Taiwan earthquake in September 1999 is an example of a nature-caused tourism crisis. The earthquake led to a 27% drop in visitors to major scenic spots (J.-H. Huang & Min, 2002; Y.-C. Huang, Tseng, & Petrick, 2008). Hotel occupancy rates

plummeted by an average of 60% (J.-H. Huang & Min, 2002; Y.-C. Huang et al., 2008). The tourism industry lost about US$ 1 billion between September 1999 and January 2000.

According to Faulkner (2001), the distinction between human-caused and nature-caused crises is becoming increasingly difficult because of the complexity of the world where identifying cause and effect is less possible. The 2001 outbreak of foot-and-mouth disease in the UK is an example of such complex relationships between human and natural systems (Ritchie, 2004).

Crisis management

Pearson and Clair (1998, p. 61) define crisis management as: *"a systematic attempt by organizational members with external stakeholders to avert crises or to effectively manage those that do occur."* Santana (2004, p. 308) defines crisis management as: *"an ongoing integrated and comprehensive effort that organizations effectively put into place in an attempt to first and foremost understand and prevent crisis, and to effectively manage those that occur, taking into account in each and every step of their planning and training activities, the interest of their stakeholders."*

According to Sturges (1994), crises progress through a series of stages. Each stage is characterized by a specific set of dynamics and dimensions. Crisis management should focus on strategies suitable to each stage (Ritchie, 2004). Building upon Fink's (1986) and Robert's (1994) frameworks, Faulkner (2001) introduces a tourism crisis life cycle with six stages: pre-event (where action can be taken to prevent disasters), prodromal (when it becomes apparent that the crisis is inevitable), emergency (the point of no return when the crisis has hit), intermediate (when the

short-term needs of the people affected must be dealt with by, for example, restoring utilities and essential services), long term or recovery (clean-up, post-mortem, self-analysis and healing), and resolution (routine restored or new improved state).

Ritchie (2004) proposes a strategic crisis management framework by fitting the lifecycle of a tourism crisis with main elements of strategic planning. The main stages in strategic management of tourism crises include crisis prevention and planning; strategic implementation; and resolution, evaluation, and feedback (Ritchie, 2004). The crisis prevention and planning stage includes activities such as scenario analysis, strategic forecasting, and contingency planning that have to be undertaken during the pre-event and prodromal stages of a crisis. These activities aim at stopping or minimizing the effects of a crisis. At the strategic implementation stage (covering prodromal, emergency, intermediate, long term or recovery stages), the selection of appropriate strategies, effective crisis communication, resource management, and collaboration with key stakeholders is required (Ritchie, 2004).

Sönmez et al. (1999) recommend developing a tourism crisis management plan to manage the aftermath of a crisis, organize a crisis management taskforce, develop a crisis management guidebook, and partner with law enforcement officials. Crisis management plans help destinations facing a crisis with protecting or rebuilding an image of safety and attractiveness, reassuring potential visitors of the safety of the area, and reestablishing the destination's functionality and attractiveness (Sönmez et al., 1999). A crisis management taskforce can be divided to teams including: a public relations team (to represent the destination to the media), a marketing/promotion team (to direct recovery marketing efforts), an information coordination team (to

gather crisis-related information), and a fund-raising team (to raise funds for crisis management efforts) (Sönmez et al., 1999).

The effect of a crisis on an organization with a positive reputation is minimal (Siomkos & Kurzbard, 1994). However, external effects such as media reports can negatively impact companies during crises. Crisis response strategies can be used to repair the organization's reputation and to prevent negative behavioral intentions (Coombs, 2007). Communication can influence how stakeholders interpret a crisis and the company in crisis. It is, therefore, important to openly communicate crisis information to media and other stakeholders (Coombs, 1999).

Strategic communication plays a key role in destinations' restoration (Beirman, 2003; Fall & Massey, 2005; Ritchie, 2004). Crisis should be openly communicated with all tourism stakeholders including tour operators, travel agents, and the press (Beirman, 2003). Crisis communication enables destinations to strategically manage stakeholder perceptions of the destination (Fall & Massey, 2005).

Travel agents and media are sources of crisis information for tourists and affect tourists' decision making (Beirman, 2003; Fuchs & Reichel, 2011). Crisis information can also be directly communicated to tourists through destination websites and social media pages. For example, Middle Eastern destination marketers mainly focus on communicating with tourists directly through their official Facebook and Twitter pages due to their frustration with the traditional media coverage (Avraham, 2013).

Beirman (2003) emphasizes ethical crisis communication. In any crisis the priority should be to protect stakeholders from harm rather than to protect ones' reputation (Coombs, 2007). For example, tourists should be made aware of the location or

extent of any damage. Such instructing information is aimed at protecting tourists from physical dangers (Coombs, 2007; Sturges, 1994). On the other hand, adopting information (e.g. information regarding actions taken by destination) helps tourists overcome the psychological stress caused by the crisis (Coombs, 2007; Sturges, 1994). The information conveyed to tourists has to be open, clear, and consistent (Mair, Ritchie, & Walters, 2016).

Knowledge gaps

Few studies have taken a demand perspective of tourism crisis management (Prideaux, Coghlan, & Falco-Mammone, 2008; Walters, Mair, & Ritchie, 2015). The demand side perspective has the advantage of allowing destinations to adjust their crisis management strategies to tourist needs and preferences (Zhou et al., 2009). Further, most studies in tourism crisis management focus on response and recovery (a reactive response) rather than reduction and readiness (a proactive response) (Henderson, 2007; Ritchie, 2008). Mair et al. (2016) call for strategies focusing on reduction and readiness that can potentially lead to building resilience.

Much of the crisis management research undertaken to date is limited to a specific context, destination, and kind of crisis (Chew & Jahari, 2014; Hitchcock & Putra, 2005; J.-H. Huang & Min, 2002; Sönmez, 1998; Sönmez et al., 1999; Sönmez & Graefe, 1998b). As Mair et al. (2016) note, tourism crisis management research needs to go beyond descriptive case studies of single critical events to increase generalizability of findings. Walters et al. (2015) call for research across a broad range of crisis contexts to identify if tourists' reactions are crisis-specific.

Given travel cancelations and demand drops following a critical event cause a destination crisis (Laws & Prideaux, 2005), strategic management of demand is critical. Strategic management of demand requires understanding the group of tourists who are resistant to crises. Crisis-resistant tourists are those tourists who stick to their travel plans despite facing a crisis at their planned destination. Targeting crisis-resistant tourists has the potential to create of steady demand and, in turn, reduce crisis-vulnerability of tourism destinations. This approach is a proactive rather than a reactive approach to crisis management in tourism. It can only work, however, if there is evidence of the existence of crisis-resistant tourists. Therefore, the first research question is:

Research Question 1: Do crisis-resistant tourists exist? If so, how can tourism destinations target them?

Tourists faced with a crisis at their planned destination need to employ strategies to reduce their perceived risk. Destinations in crisis can take actions to counteract risk perceptions and to prevent cancelations. Risk-reduction strategies such as information communication, advertising, and guarantees can be employed (Mitchell & Vassos, 1998; Moutinho, 1987).

Previous research identifies strategies to enhance travelers' confidence to travel to crisis-affected destinations including: free insurance coverage; a guarantee of personal safety of tourists by the local government; transparency of information; and introduction of surveillance systems or protection measures (Kozak et al., 2007; Law, 2006). Other strategies to minimize the impacts of tourism crises are aggressive marketing and promotional offers (Beirman, 2003; Pizam, 1999; Sönmez et al.,

1999). However, no study directly asks tourists what can be done to prevent them from canceling. Therefore, the second research question is:

Research Question 2: What is tourists' advice on how to prevent them from canceling in times of crisis?

In order to decide what preventative actions to take, policymakers need to assess the relative merits of alternative actions (Blake & Sinclair, 2003; Ritchie, 2004). To date, no systematic research has investigated consumers' reactions to and the stated effectiveness of preventative actions (Carlsen & Liburd, 2008). Selecting the most appropriate preventative measure in a specific kind of crisis and directing it at the appropriate segment of tourists is critical to reducing travel cancelations. Therefore, the third research question is:

Research Question 3: Does the stated effectiveness of preventative measures vary across kinds of crises and tourists?

The infrastructure at destinations is often severely damaged after a crisis, particularly after a natural disaster (Carlsen & Liburd, 2008). Accommodation shortages lead to a drop in tourist numbers. The rebuilding period can take a long time which results in significant losses for the destination. To date, nobody has investigated possibilities of harvesting existing infrastructure, such as residential homes, in situations where an unexpected disaster leads to a sudden drop in available accommodation. Equally, although prior work has emphasized the importance of stakeholder collaboration during a crisis (Carlsen & Liburd, 2008; Ritchie, 2004), the potential contribution of residents has not been investigated in detail. Whether and how residents can help

destinations in times of crisis is not known. Neither is it known whether support from residents affects tourists' decision making when faced with a crisis at their planned destination. The fourth research question is:

Research Question 4: Would residents help with destination recovery? If so, would tourists accept offers of help from residents?

The following chapters address the above research questions. To address Research Question 1, Chapter 3 theoretically conceptualizes and empirically tests the existence of crisis-resistant tourists. It then profiles crisis-resistant tourists in detail to enable tourism destinations to target them. Chapter 4 addresses Research Question 2 by directly asking tourists what would prevent them from canceling. Possible measures emerge which can be employed by destinations in crisis to prevent cancelations. In addressing Research Question 3, Chapter 5 identifies the comparative stated effectiveness of prevention approaches – identified in Chapter 4 and in the literature – across kinds of crises and tourists. Chapter 6 points to the critical roles residents can play in managing a tourism crisis. It identifies supportive segments of residents that can be activated in times of crisis. It also shows if support from residents would be accepted by tourists.

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Chapter 3: Essay 1 - Crisis-resistant Tourists

Hajibaba, H., Gretzel, U., Leisch, F., & Dolnicar, S. (2015). Crisis-resistant tourists. *Annals of Tourism Research*, *53*, 46-60.

Contributor	**Overall contribution**
Homa Hajibaba	62%
Ulrike Gretzel	12%
Friedrich Leisch	3%
Sara Dolnicar	23%

Annals of Tourism Research 53 (2015) 46–60

Contents lists available at ScienceDirect

Annals of Tourism Research

journal homepage: www.elsevier.com/locate/atoures

Crisis-resistant tourists

Homa Hajibaba [a,*], Ulrike Gretzel [b], Friedrich Leisch [c], Sara Dolnicar [b]

[a] University of Wollongong, Australia
[b] The University of Queensland, Australia
[c] University of Natural Resources and Life Sciences, Austria

ARTICLE INFO

Article history:
Received 1 April 2014
Revised 25 February 2015
Accepted 2 April 2015
Available online 25 May 2015

Coordinating Editor: J. Tribe

Keywords:
Crisis-resistant tourists
Market segmentation
Risk propensity
Resistance to change
Travel cancellation

ABSTRACT

Despite the negative impact of unexpected events—such as 9/11 and the Global Financial Crisis—on the tourism industry, and despite substantial research into managing crises in tourism, little is known about tourists who are most needed in such situations: crisis-resistant tourists. In this study, crisis-resistant tourists are defined and theoretically conceptualized. Empirical results indicate that segments of tourists resistant to external or internal crisis events indeed exist and—as theoretically postulated—demonstrate higher levels of risk propensity and resistance to change. In contrast, risk shifting is not associated with being a crisis-resistant tourist. An initial profile of crisis-resistant tourists is provided, offering guidance to the tourism industry on how to identify and communicate with this highly attractive market segment.

Article available online at:

http://www.sciencedirect.com/science/article/pii/S0160738315000511

Abstract

Despite the negative impact of unexpected events – such as 9/11 and the Global Financial Crisis – on the tourism industry, and despite substantial research into managing crises in tourism, little is known about tourists who are most needed in such situations: crisis-resistant tourists. In this study, crisis-resistant tourists are defined and theoretically conceptualized. Empirical results indicate that segments of tourists resistant to external or internal crisis events indeed exist and – as theoretically postulated – demonstrate higher levels of risk propensity and resistance to change. In contrast, risk shifting is not associated with being a crisis-resistant tourist. An initial profile of crisis-resistant tourists is provided, offering guidance to the tourism industry on how to identify and communicate with this highly attractive market segment.

Introduction

This study is the first to propose that a segment of tourists exists, which is inherently more resistant to crises than other tourists. If indeed there is evidence of the existence of such tourists, selecting them as a target market may reduce crisis-vulnerability of tourism businesses and destinations, thereby offering a preventative, rather than curative, approach to crisis management in tourism. Tourism is an important contributor of economic growth in many countries, but also highly reactive to unexpected critical events. Unexpected critical events could include external events such as natural disasters, the outbreak of epidemics, terrorist attacks, financial crises, but also internal events such as family emergencies. When such unexpected events occur, tourists cancel their plans, and tourist demand can drop dramatically. This puts local tourism service providers at serious risk.

A few such external critical events occurred in the past decade, and illustrate the extent that tourism demand can be affected. The Bali bombings led to a 40% fall in outbound tourist arrivals (Hitchcock & Darma Putra, 2005), the SARS pandemic caused a 55% decline in the number of Japanese people traveling overseas (Cooper, 2006), and the Global Financial Crisis (GFC) led to a 13% drop in arrivals to OECD countries (OECD, 2010). In addition, people also encounter situations in their own lives. For example, sickness and family emergencies can lead to booking cancelations. Although such incidents tend to distribute randomly across all tourist bookings, and do not have the effect of a major decline in demand at one or across several destinations, such incidents are still of interest in the context of the present study as how travelers react to them determines the attractiveness of specific travel consumers for destinations.

While the tourism literature presents findings related to risk perceptions of certain destinations, tourists' risk management strategies in particular contexts, and reactions to specific crisis events, it does currently not investigate whether there are tourists who are generally more likely to be resistant to crises. We investigate the notion of such crisis-resistant tourists, i.e. those who do not cancel bookings; and instead, follow through with travel plans even if unexpected events occur. Specifically, the aims of this study are to: 1) theoretically conceptualize the crisis-resistant tourist; 2) empirically test whether crisis-resistant tourists exist, and whether the proposed theoretical conceptualization is correct; 3) if so, describe crisis-resistant tourists in order to enable tourism destinations and tourism service providers to target them; and, based on the insight from the study, 4) provide an operationalization of crisis-resistant tourists that can inform tourism marketing and management.

This study contributes to the tourism literature because it is the first to conceptualize and empirically study crisis-resistance of tourists in general terms rather than related to specific events or destinations. It further contributes to risk-related literature by identifying factors that drive such general crisis-resistant behavior. The study's practical value lies in providing tourism destinations and tourism businesses with a profile of crisis-resistant tourists. Such a profile enables active targeting of crisis-resistant tourists through customized products and communication messages. Targeting crisis-resistant tourists provides some protection against unpredictable internal and external crises that are beyond destinations' control because this segment of the tourist market does not cancel trips; rather, they follow through with their travel plans no matter what happens at the destination or in their private lives.

Literature review

Crisis and disaster management is a prominent topic in tourism connected to a growing body of literature. Nevertheless, most studies focus on reactive response and recovery; only few propose proactive strategic planning (Ritchie, Bentley, Koruth, & Wang, 2011; Ritchie, 2004; 2009). It is argued that effective crisis and disaster management requires the development of resilience. Resilience can be defined as an organizational entity's 'ability to survive – possibly even thrive – in times of crisis' (Seville, Brunsdon, Dantas, Le Masurier, Wilkinson, & Vargo, 2008, p.18). The importance of resilience has been discussed in relation to tourism destinations, and their ability to withstand internal and external crises (e.g., Farr-Wharton, Brown, Dick, & Peterson, 2012).

However, current literature focuses primarily on resilience achieved through organizational structures and capacities. Farr-Wharton et al.'s (2012) paper represents a rare case advocating for a marketing-focused approach towards establishing resilience. The present study argues that the strategic management of demand is critical to building up resilience in tourism destinations, and that this requires an understanding of who the tourists are that would endure the risks of traveling during a personal or external crisis event.

The tourism literature acknowledges that engaging in tourism-related behaviors can be associated with a wide range of risks (Chew & Jahari, 2014). General worries as well as country-specific risk perceptions broadly influence travel decisions but especially during times of crises (Fischhoff, De Bruin, Perrin, & Downs, 2004). There is also a common understanding that tourists' risk perceptions can be dramatically influenced by media reports (Chew & Jahari, 2014). Numerous studies

have focused on categorizing and assessing travel-related risks and on revealing the risk perceptions of diverse tourist groups (e.g., Roehl & Fesenmaier, 1992; Sönmez, 1998; Sönmez & Graefe, 1998; Floyd & Pennington-Gray, 2004; Rittichainuwat & Chakraborty, 2009; Aro, Vartti, Schreck, Turtiainen, & Uutela, 2009; Wolff & Larsen, 2014). The literature has also extensively dealt with country-specific risk perceptions (Fuchs & Reichel, 2011; Lepp, Gibson & Lane, 2011; Carter, 1998; Sirakaya, Sheppard & McLellan, 1997), especially in the context of destination image studies.

Tourists can employ a number of risk reduction strategies (e.g. look for more information) to reduce uncertainty and hence their perceived risk (Reichel, Fuchs, & Uriely, 2009). Several studies have looked into how tourists deal with subjectively perceived and objectively reported risks, finding, for instance, that tourists engage in varied rationalization strategies to justify their travels to risky destinations (Uriely, Maoz, & Reichel, 2007; Fuchs, Uriely, Reichel, Maoz, 2013). Further, perceptions of how much tourists can control behaviors related to the specific risks (e.g., health risks) can influence their willingness to travel to risky destinations (Jonas, Mansfeld, Paz, & Potasman, 2011). Importantly, not all crisis events equally deter tourists. Tourists judge specific risk dimensions differently: for instance, Pizam and Fleischer (2002) find that the frequency of terrorist events has a greater impact on tourist behavior than the severity of a single event.

A major shortcoming of the research reported in the existing literature is that risk perceptions and travel to risky destinations have been investigated in specific contexts rather than across destinations, trip contexts and specific crises. For instance, destinations studied include mostly those that had experienced terrorism,

political instability or a natural disaster such as New Orleans (Pearlman & Melnik, 2008), the Middle East (Sharifpour, Walters, & Ritchie, 2014) and Norway (Wolff & Larsen, 2014). Trip contexts include group travel (Tsaur, Tzeng, & Wang, 1997), backpacking (Elsrud, 2001) and religious tourism (Mansfeld, Jonas, & Cahaner, 2014). This makes it impossible to derive insights from past research regarding general propensities to take travel risks and to determine potential resistance across destination and crisis-contexts, which is the goal of this paper.

However, the literature also recognizes that – while risk perceptions are important in determining destination and tourism product choice (Quintal, Lee, & Soutar, 2010) – risk is not necessarily a deterrent in the travel context, and can sometimes even be a motivating factor (Fuchs & Reichel, 2011). Whole industry sectors (such as adventure tourism operators) rely on tourists' willingness to take risks, although Cater (2006) convincingly argues that it is thrill and not risk that these tourists are seeking, and that operators need to reduce and carefully manage actual risks for this industry to remain viable.

Risk perceptions in tourism, and especially in relation to crisis events, are very emotion laden (Lehto, Douglas, & Park, 2008). Yet, some tourists seem to be able to set their worries and anxieties aside, and engage in travel even when faced by a crisis that involves risks beyond their control. These tourists are the pillars on which destinations and tourism providers could build their marketing efforts aimed at creating steady demand or demand driving after-crisis recovery. Identifying who they are and what drives their crisis-resistance is the overarching aim of this paper.

Theoretical conceptualization of crisis-resistant tourist behavior

Roselius (1971) suggests that consumers have four options when faced with risks related to a purchase: 1) reduce risks by decreasing the probability that the purchase will fail; 2) shift from one type of perceived loss to one for which they have more tolerance; 3) postpone the purchase; or 4) make the purchase and absorb the unresolved risk. From an individual tourist's perspective, a typical reaction to a crisis event, and the risks it involves, would be reducing risks through swift changes in travel plans (e.g. travelling to a different destination), while the overall commitment to travel would still be maintained. Alternatively, travel plans could be postponed or abandoned altogether. The former is often actively encouraged by travel intermediaries or transportation providers who seek to shift tourist flows away from crisis-stricken destinations; the latter is discouraged through high cancelation fees (Park & Jang, 2014). Yet, such behavior is of no use to specific destinations and their tourism industry when facing potential losses of important revenue sources. It can also accentuate or perpetuate crisis events if the crisis was first only confined to a small area, but changes in travel plans involve avoiding destinations at large.

The desirable reaction that stands at the center of the present study is crisis resistance that involves sticking to original plans or intended choices, which corresponds to strategy 4 according to Roselius (1971). However, it should not be seen as a form of ignoring risk; nor should it be confused with extreme forms of tourism that seek out danger or derive pleasure from consuming the aftermath of disasters (Stone & Sharpley, 2008). We define crisis-resistant tourists as those that tend to absorb risks instead of engaging in risk avoidance strategies.

Resistance means opposing motion or change (The Free Dictionary, 2014). This is not necessarily a quality inherent in travel behavior. Tourists frequently diverge from their plans (March & Woodside, 2005), and flexibility is often seen as an integral part of what makes travel pleasurable (Hwang, 2010). Crisis-resistant travel behavior is not conceptualized as completely inflexible, but rather as stable as far as the destination-choice level is concerned (Jeng & Fesenmaier, 2002). Crisis-resistant tourists are those who exhibit such stable behaviors across all forms of crises to which they are exposed. In the narrowest sense, this stability refers to not cancelling trips already booked; however, if this stability is expanded to include travel plans, crisis resistance can also mean booking trips despite knowledge of adverse factors.

Beirman (2003a) identifies three categories of post-disaster markets: Stalwarts, Waverers, and Disaffected or Discretionary. Stalwarts travel to a destination they exhibit great affinity for, and to show solidarity after a disaster strikes. Waverers are the first to return after a crisis. The Disaffected will not travel to post-disaster destinations because they are deterred by anything that complicates their vacation. In contrast, we conceptualize crisis-resistant tourists as those that travel *during or shortly after the crisis* without taking into account their motivations to do so.

Most importantly, we conceptualize crisis-resistance as an enduring behavioral pattern rather than an event-specific reaction. Therefore, crisis-resistance is independent of risk-perceptions regarding the event or the destination, but also independent of the purpose of a particular vacation. However, we do recognize that risk-related behavior can be determined by the risk category and by perceived behavioral control; we therefore postulate that there are potential differences in crisis-resistance according to whether the crisis is an external (natural or political) or

internal one (health or family emergency). There are potentially three different explanations for such resistant behavior: 1) high willingness to take risks; 2) high resistance to change; and/or 3) high externalization/shifting of risks (see Figure 1). This study seeks to test whether they can indeed be empirically linked to crisis-resistant tourist behavior.

As discussed above, crises involve a diverse array of risks; consequently, crisis-resistant tourist behavior automatically means exposure to a risk of some sort. We assume that crisis-resistant tourists do not necessarily perceive the risk differently but have a high threshold for handled risk, which is the risk left over at the end of risk reduction processes (Bettman, 1975). Ergo, these tourists should exhibit a generally high propensity to take risks. Risk propensity refers to the generic orientation towards taking a risk when deciding how to proceed in situations with uncertain outcomes (Rohrmann, 2002). Thus, risk propensity is an attitude, which is assumed to influence risk appraisal and, in turn, risk behavior. Risk attitude has been conceptualized as stable rather than situation-specific (Visser, Krosnick, & Simmons, 2003). However, the role of intrinsic risk attitudes in determining actual risk behavior is not as clear-cut as it might seem, and existing research has produced mixed results (Schoemaker, 1993). Further, whether risk attitudes are consistent across different risk domains (e.g., health versus financial risk) and can be captured by an overall measure of risk propensity has been questioned (Weber, Blais, & Betz, 2002).

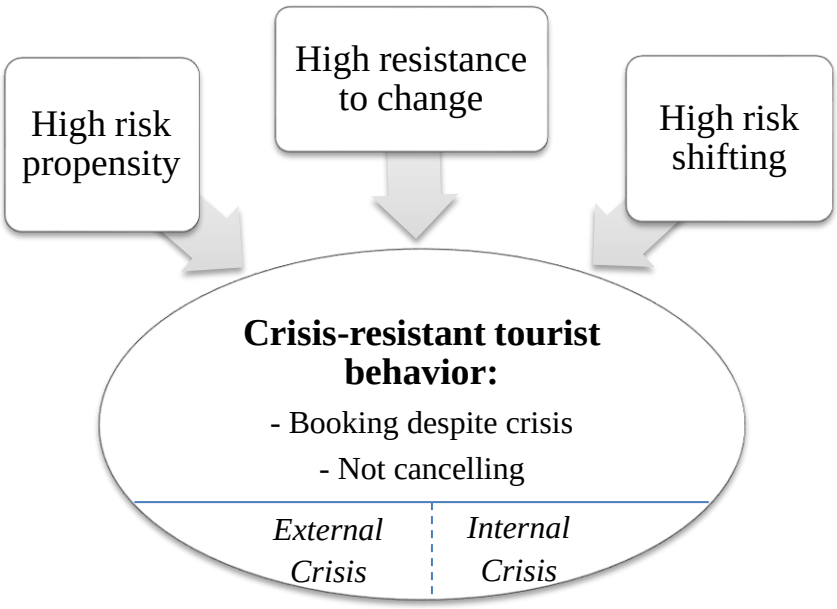

Figure 1. Conceptual model of crisis-resistant tourist behavior

The literature suggests that individuals travelling to crisis-stricken destinations might have more effective risk reduction strategies than others (Uriely et al., 2007). Yet, given the proposed definition of crisis-resistance as applying across different categories of crisis events, which comprises a wide range of risks, it is assumed that a general willingness to take risks is an important precondition for crisis-resistant behavior to be realized. Whether this is actually the case needs to be empirically confirmed.

The second potential explanation for why tourists travel despite a crisis event is inertia. Change can be difficult, and any change – no matter how small – requires effort. Oreg (2003) defines an individual's inability or unwillingness to cope with change as resistance to change, and suggests that it is an enduring personality trait. It can be assumed that individuals high in resistance to change will execute trip plans

despite the occurrence of a crisis because the cognitive and emotional cost of making changes would be too high. This can lead these individuals to engage in crisis-resistant behavior even though their propensity to take risks might be low.

If one is not willing to take on the full risks of travel fueled by a crisis event, externalization of risks or risk shifting strategies can be employed. Taking out travel insurance is the most common and most direct method. Externalization of risks means that the risk is successfully transferred to a separate party. The travel insurance literature has looked at factors such as what claims travel insurance holders make (Leggat & Leggat, 2002), and what the influence of experience or risk acculturation is on the likelihood to purchase insurance (Dean, 2010), but does not empirically investigate the link with travel to riskier destinations or travel despite personal health/family issues. According to Beirman (2003b), risk-shifting is often not a viable option for travelers in the case of destination-specific crises because insurance premiums skyrocket. However, this study's interest is in the general propensity to engage in risk shifting, not in trying to reduce risks once a crisis is imminent or has occurred.

Methodology

Fieldwork administration and measures

A survey was conducted in four English-speaking mature tourist markets: Australia (n = 918), Canada (n = 922), the United Kingdom (n = 952) and the United States of America (n = 941). The questionnaire was developed by the authors, but data was collected by a professional online research panel company that maintains panels of respondents internationally, and recruits them using different media to ensure proper

representation. Online surveys were used because they capture representative samples similar to other survey techniques (Dolnicar, Laesser, & Matus, 2009), but also allow the collection of substantial samples sizes internationally at relatively low cost. Members of the online research panel were invited to participate via email and – in line with the fieldwork company's standard procedure – a small compensation was paid to panel members who completed the survey. Respondents were asked a number of questions about themselves and their travel behavior (see Appendix 1).

Behavioral resistance – which is conceptualized as the lack of response to a trigger – was measured by asking respondents to indicate critical events despite which they followed through with their planned travel. These critical events included sickness, family emergency, terrorist attacks or street riots, natural disaster within a week before or during the time of departure, and major strikes at the destination. Respondents were also asked, for the same critical events, if they had ever cancelled a planned trip because of such events. This was asked to capture non-resistant behavior. Note that the critical events used include both external events (terrorist attacks or street riots, natural disasters, and major strikes) and internal events (sickness and family emergency). The study therefore acknowledges existing crisis typologies based on locus, i.e. whether the crisis pertains to the actor or a situation (Coombs & Holladay, 1996), as well as common distinctions among natural and man-made disasters for the external dimension (Shaluf, 2007). The behavioral resistance measure was developed for this study, and is not based on an existing scale.

Risk propensity was measured adopting the risk propensity questionnaire (RPQ) developed by Rohrmann (2002). As described by Harrison, Young, Butow, Salkeld,

& Solomon (2005), RPQ determines risk propensity by asking respondents to indicate their willingness to take physical risk (risk of injury or death), financial risk (risk of losing money or other assets), health risk (risk of catching a harmful disease), social risk (risk of losing the respect and acceptance of others and harming one's social status), and then asks respondents to compare their general risk propensity to others. Specifically, the study used the operationalization of the RPQ by the NSW Injury Risk Management Research Centre (NSW Injury Risk Management Research Center, 2009, p. 70-71) with slider scales ranging from extremely low (0) to extremely high (100) willingness to take a specific type of risk.

Resistance to change is conceptualized as a general personality trait and was measured as an adaptation of the resistance to change scale developed by Oreg (2003) (two workplace-related items were not included). The scale covers the dimensions of routine-seeking, emotional reaction to change, short-term thinking, and cognitive rigidity. Respondents were asked to indicate their willingness to change using 16 'yes' or 'no' questions, such as: I generally consider change to be a negative thing; changing plans seems like a real hassle to me; once I've made plans I'm not likely to change them; I sometimes find myself avoiding changes that I know will be good for me. The 16 items were added up to derive a general resistance to change score.

Additional measures to help conceptualize crisis-resistant behavior were general experience with travel cancelations, and whether travel insurance was typically taken out. A wide range of additional variables was collected in order to profile crisis-resistant tourists. These variables included variables measuring their travel behavior (number of domestic and international trips as well as typical travel activities), travel

motives, sources of information used when planning vacations, how important vacations were to them (money spent on vacation compared to others), how involved they were in travel planning (how much of planning done personally, how much time spent planning), and who they typically traveled with.

Their psycho-graphic background was measured using personality as operationalized by the 'big five factors' of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Goldberg, 1999), for which 25 items adopted from the International Personality Item Pool were asked from the respondents (IPIP, 2008; Goldberg, 1999). Each of the big five factors were measured with five items. Finally, a number of socio-demographic questions were asked.

Past cancelation behavior, the purchasing of travel insurance, and the use of travel information sources were measured on binary scales because this answer format is conceptually most suitable for the nature of the questions. Binary format was also used for some of the psychological scales because the summated value enters the model, not the individual binary item level value, and because respondents are able to process the large number of questions requiring less cognitive effort and time when presented with discrete answer options (Dolnicar, 2013; Dolnicar & Grün, 2013).

Sample characteristics

In total, 3,903 respondents completed the survey. Respondents who had never encountered any of the critical events listed in the questionnaire (sickness, family emergency, terrorist attacks or street riots, natural disaster within a week before or during the time of departure, and major strikes at the destination) could not respond to the questions measuring behavioral resistance and were excluded. The final data

set therefore contains 1,465 respondents from Australia (n = 334), Canada (n = 361), the UK (n = 416), and the USA (n = 354).

The sample consists of 691 females and 774 males. The largest age group in the sample (36%) comprises respondents over 55 years. The percentage of respondents in other age groups of 25–34, 35–44, and 45–54 is equally 18%. The fact that 54% of respondents in the sample are aged over 44 does not bias our results because we are not aiming at making precise statements about population percentages. Forty-eight percent of respondents are married, 26% are not in a relationship, 14% live with their partner, and 11% are in a relationship, but do not live together. Forty-one percent of tourists work full-time, 22% are retired, and 15% work part time; 27% are educated up to undergraduate, 26% up to technical training, 25% up to secondary school, and 17% up to postgraduate level. The median personal income is AUD 40,560. As expected for a sample of active travelers, the respondents exhibited high openness to experience (mean = 4.28) and low neuroticism (mean = 2.11). On average, they also score rather high on agreeableness (mean = 4.18) and conscientiousness (mean = 4.13); whereas, the results for extraversion are mixed: many are extroverts, but there are also many introverts (mean = 3.25).

The average number of trips per year within and outside the country of residency is 3.2 and 1.8, respectively; 45% typically travel with their partner, 24% with their partner and children, 16% with their friends, and 14% travel alone; 30% spend less on a typical annual holiday compared to most people they know, 51% spend the same, and only 18% spend more. The majority are very involved in travel planning: 43% do all the planning and 34% do more than half. In addition, 28% spend more time planning than others, and 48% spend at least the same amount as others; only

24% spend less. Forty-six percent typically buy travel insurance.

Of all the respondents, 605 (41%) cancelled a vacation in its entirety in the past. The proportion of respondents who did not (did) cancel travel plans despite a critical event is 31% (25%) in the case of sickness, 19% (25%) in the case of a family emergency, 27% (8%) in the case of terrorist attacks or street riots, 28% (11%) in cases where a natural disaster hit within a week before or during the time of departure, and 36% (6%) in the case of major strikes at the destination. Overall, 41% of respondents went on vacation despite facing at least one internal critical event, and 60% despite facing at least one external critical event; 35% cancelled a trip due to at least one internal critical event and 15% cancelled a trip because they experienced at least one of the external critical events listed in the survey.

Resistance to change is generally low (mean = 6.26 on a 16-point scale). Respondents are more willing to take social risks (mean = 52.31) than physical (mean = 46.93), financial (mean = 41.95) and health risks (mean = 40.67). All the risk propensity scale items (general, social, physical, financial and health) were measured on a 100-point scale.

Data analysis

Cluster analysis was used to determine whether a segment of tourists resistant to internal critical events and a segment resistant to external critical events could be identified. Cluster analysis was chosen because the sample is relatively small, and model-based methods perform better on large samples, which allow them to estimate all the required parameters. The four items measuring behavioral resistance to

internal critical events and the six items measuring behavioral resistance to external critical events served as the segmentation bases.

To identify tourists resistant to internal crises, a sub-sample of 989 was extracted from the main sample; these respondents had encountered an internal crisis in the past. The same approach was used to identify tourists resistant to external crises; 1007 respondents had experience with such events. The available sample size of 989 for internal events and 1007 for external events is sufficient for a segmentation analysis with four and six variables in the segmentation bases, respectively. According to Dolnicar, Grün, Leisch, and Schmidt (2013) who—based on simulation studies with artificial data modelled after typical empirical tourism data sets—recommend a minimum of 70 times the number of variables. Data was not preprocessed because the segmentation base was binary in nature, thus not requiring standardization or any other kind of data transformation, and because the number of variables was low and each variable was meaningful. A condensation of variables would have reduced interpretability of findings.

All computations were performed using R version 3.0.1 (R Development Core Team, 2013). K-means and neural gas are two popular clustering algorithms. Data were clustered with the neural gas algorithm (Martinetz, Berkovich, & Schulten, 1993) using the R package flexclust (Leisch, 2006). Several cluster algorithms, including k-means, were calculated; the neural gas solution was chosen because it generated the most distinct segments. Segments are distinct if they contain tourists that are strongly similar to each other within each segment but are very different from tourists in other segments. Neural gas also emerged as the most stable algorithm for this type of data in simulations on both artificial and real-world data (Dolnicar, Leisch, Weingessel,

Buchta, & Dimitriadou, 1998; Dolnicar & Leisch, 2010), and has been used for market segmentation studies in tourism in the past (Mazanec, Ring, Stangl, & Teichmann, 2010).

To determine a suitable number of clusters, the bootstrapping method by Dolnicar and Leisch (2010) was used. Bootstrapping simulates what would happen if new survey data were clustered. The procedure proposes the number of clusters that is most stable across sample variations and random initializations of the algorithm. Shaded bar plots (Dolnicar & Leisch, 2013) were used to visualize market segments because they allow easy comparison of several clusters. Differences between clusters in metric background variables were tested using the Wilcoxon rank-sum test for means of two groups and Kruskal-Wallis rank-sum test for means of several groups. The Wilcoxon rank-sum test and Kruskal-Wallis statistical tests are non-parametric tests which allow for comparison of two and three or more groups, respectively; unlike MANOVA, they do not assume normality and work with uneven sample sizes. Differences in categorical background variables were tested using a Chi square test; p-values were corrected for multiple testing using Holm's (1979) procedure.

Results

The profiles of segments resulting from the analyses are illustrated in Figure 2 (for internal events) and Figure 3 (for external events). The horizontal lines represent the percentage of trip cancelation or not cancelation for each internal (and external) critical event for the sample of 989 (and 1007) respondents. The horizontal bars indicate the percentage of respondents within each segment who cancelled or went on vacation in spite of the occurrence of a critical event.

The key characteristics of each segment emerge when comparing the horizontal lines (responses at sample level) with horizontal bars (responses at segment level). For instance, in Figure 2, the key feature of Segment 4 is that 100% of segment members have canceled their vacation due to a family emergency, many more than in the overall sample (40%). In Figure 3, the percentage of respondents in Segment 2 who went on their vacation despite a natural disaster is much higher than the average of the sample, indicating that this is a key feature of Segment 2.

The differences between the segment and sample percentages form the basis of segment profiling. Therefore, the highlighted bars in the segment profile plots indicate variables that make a segment distinct (referred to as *marker variables*). According to a rule specified by Dolnicar and Leisch (2013, p. 14): 'a variable is called a marker variable if the absolute deviation from the overall mean is 25% of the maximum value seen, or if the relative deviation is 50%.' Marker variables are important for the description of segments while non-marker variables are less useful in understanding segments. For instance, all the variables in Figure 2 are marker variables, while in Figure 3 the first variable (gone/terrorist attack) is not a marker variable for describing Segment 2, and neither is the third variable (gone/strike) for Segment 5, which means this variable is not very distinct and does not aid in understanding the nature of Segment 5.

The segments of internal and external crisis-resistant tourists

Internal crisis-resistant tourists

Figure 2 shows the six segments obtained from segmentation analysis using internal critical events (sickness and family emergency) on the sample of 989 respondents.

Segment 1, Segment 3 and Segment 5 in Figure 2 clearly show the pattern one would expect from internal crisis-resistant tourists. Segment 1 (n=126) contains tourists who have followed through with their vacation, despite a family emergency, more often than the average tourist population (Family Emergency-resistant Segment).

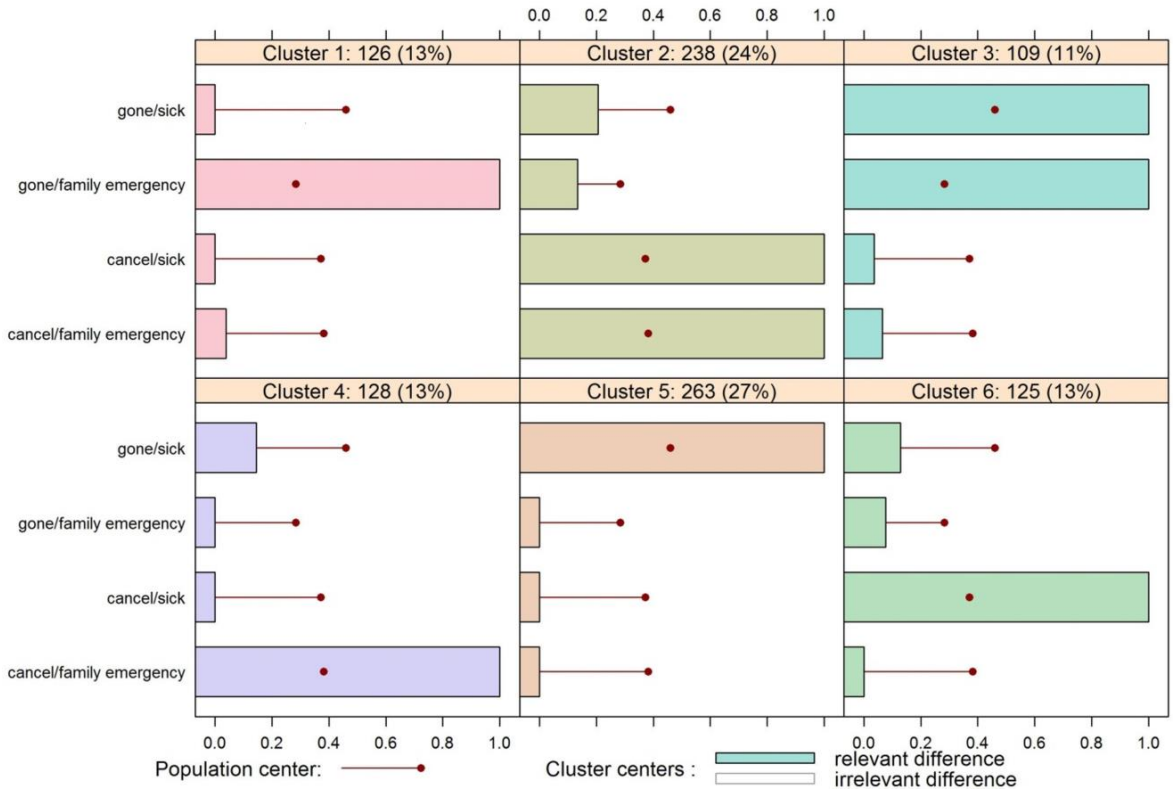

Figure 2. Segment profile plot related to internal critical events

Tourists in Segment 3 (n=109) did not cancel their vacation significantly more often than the average tourist population, despite facing both types of internal crisis events (Internal Crisis-resistant Segment). Segment 5 (n=263) contains tourists who, despite facing sickness, did not cancel their travel booking significantly more often than the average tourist population (Sickness-resistant Segment).

Segments 2, 4 and 6 in Figure 2 show non-resistant characteristics. In Segment 2

(n=238), the percentage of tourists who have canceled their vacation due to both types of internal crisis events is higher than the sample average (Internal Crisis-non-resistant Segment). In Segment 4 (n=128), the proportion of tourists who have experience of canceling their vacation due to family emergency is higher than the sample average (Family Emergency-non-resistant Segment). In Segment 6 (n=125), the percentage of tourists who canceled their travel booking due to sickness is higher than the sample average (Sickness-non-resistant Segment).

In order to learn about the characteristics of internal crisis-resistant tourists, the Sickness-resistant Segment, Family Emergency-resistant Segment, and Internal Crisis-resistant Segment are combined (n=498) for our further analyses. This combined internal crisis-resistant segment is compared to the combination of the three non-resistant segments (n=491).

External crisis-resistant tourists

Figure 3 shows the five segments obtained from segmenting 1007 respondents who have faced external crises events. Segment 1 displays the profile of an external crisis-resistant segment: members of this segment have followed through with their vacation despite external events significantly more often than the average tourist population, and they have cancelled significantly less frequently (External Crisis-resistant Segment, n=182). Segment 2 (Natural Disaster-resistant Segment, n=207), Segment 4 (Strike-resistant Segment, n=236) and Segment 5 (Terrorist Attack-resistant Segment, n=213) are resistant to only one of the external critical events each. Segment 3, on the other hand, is a segment of non-resistant tourists who have experience cancelling their vacation due to all the three external critical events (External Crisis-non-resistant Segment, n=169). Segment 1 (External Crisis-resistant

Segment, n=182) is compared with all other segments (n=825) in the further analyses.

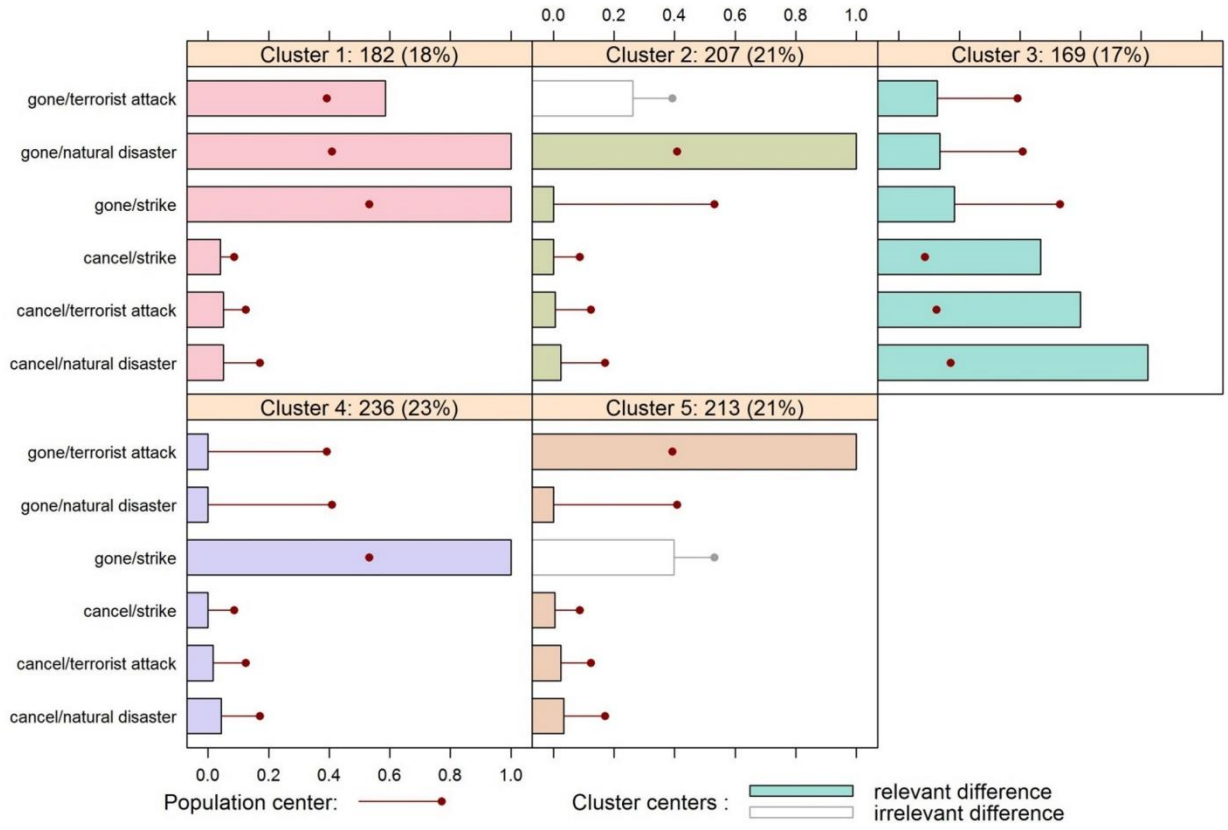

Figure 3. Segment profile plot related to external critical events

Testing the conceptualization of crisis-resistant tourists

A high-risk propensity was postulated to be a psychological driver of behavioral resistance to crisis events. The results show that behaviorally resistant tourists (to both internal and external critical events) do, indeed, exhibit a greater willingness to take risks across all risk categories, and generally perceive their risk propensity as being higher than that of others (Table 1 and Table 2). The findings indicate that crisis-resistant tourist segments score significantly higher on the resistance to change scale; that is, they prefer routines, usually consider change to be a negative thing,

find change stressful, do not change their mind easily, and a change of plans seems like a real hassle to them. Therefore, both risk propensity and resistance to change are established as important markers for crisis resistance to both internal and external critical events.

Validating segmentation results, only a small proportion (9.8%) of internal crisis-resistant tourists and 20.8% of external crisis-resistant tourists have ever cancelled a trip in its entirety. In addition, internal crisis-resistant tourists score somewhat lower (43.0%) on buying travel insurance compared to other travelers (47.7%), while external crisis-resistant tourists score somewhat higher (53.3%) on buying travel insurance compared to other travelers (48.0%). However, the differences are not statistically significant.

Characteristics of crisis-resistant tourists

Internal crisis-resistant tourists

The internal crisis-resistant tourists differ significantly from other tourists in several ways (see Tables 3 and 4 in Appendix 2). Internal crisis-resistant tourists are significantly younger (median=41); more of them work full-time (49.2%), fewer are retired (14.1%), fewer are married (43.8%). Internal crisis-resistant tourists also differ significantly with respect to one of the big five personality traits: they score lower on agreeableness (4.07). Furthermore, members of the internal crisis-resistant segment are distinct with respect to their use of information sources for travel planning: they obtain travel-related information more often from social media (44.6%), social clubs (30.7%), and other travelers not personally known to them (44.0%). They are also more likely to do the travel planning themselves (48.2%).

Internal crisis-resistant tourists also differ significantly from non-resistant tourists in some travel behaviors, as shown in Table 4 in Appendix 2. The number of trips per year outside the country of residence is higher (mean=2.6), they are more interested in adventurous activities such as mountain biking (39.4%), horse riding (47.4%) and hiking (65.5%), and they are less interested in activities such as sightseeing and relaxing. Internal crisis-resistant tourists score significantly higher in some of the motivational elements such as in doing sports (42.4%), improving health and beauty of body (58.2%), not paying attention to prices and money (62.9%), and an intense experience of nature (71.1%). There is also significant difference between the two segments in terms of typical travel companions: internal-crisis resistant tourists are more frequently seen travelling with their partner and children (30.5%), or with an organized group (2.0%), and less frequently alone (13.3%).

Table 1. Internal crisis-resistant tourists: risk propensity, resistance to change, cancelation behavior and risk shifting.

Variables	Resistant Segments 1,3,5 (n=498)	Non-resistant Segments 2,4,6 (n=491)	p-value
Do you typically buy trip insurance when making travel reservations?	43.0%	47.7%	.156
Have you ever cancelled a vacation travel booking in its entirety?	9.8%	100%	.000
Resistance to change (mean)	7.0	6.1	.000
Risk propensity (mean):			
… physical risk	51.5	43.2	.000
… financial risk	45.7	40.2	.000
… health risk	46.4	36.1	.000

… social risk	55.1	51.2	.013
… risk propensity compared to others	55.9	52.6	.026

External crisis-resistant tourists

External crisis-resistant tourists are significantly different from other tourists in some socio-demographic, psychographic and travel behavior variables (see Tables 5 and 6 in Appendix 3). The external crisis-resistant tourists are significantly younger (median=39), more of them work full-time (60.4%), and fewer are retired (11.5%). Tourists in the resistant segment score significantly higher in one of the big five personality traits: extraversion (mean=3.55).

Critical to tourism marketers, members of the external crisis-resistant segment differ significantly with respect to their use of information sources for travel planning (see Table 6 in Appendix 3). More of them do not require any information at all (34.6%), but if they do, they are more likely to use social media (48.4%), social clubs (34.6%), motoring associations (41.2%), and other not personally known travelers (53.8%) as a source. They are less likely to rely on information provided by friends or relatives (70.9%), suggesting that they are more likely to take advantage of the strength of weak social ties when obtaining travel information (Granovetter, 1973). Nevertheless, traditional word of mouth is still important to them. Crisis-resistant tourists are more likely to do the travel planning themselves (57.1%).

External crisis-resistant tourists also differ significantly from other tourist segments in travel motivations and behavior. They undertake more domestic (mean=4.0) and international (mean=3.1) travel, engage more in adventurous activities (such as mountain biking (51.1%), horse riding (57.1%) and hiking (75.3%)) and score

significantly higher on the motivations of doing sports (49.5%), improving health and beauty of body (59.3%), realizing their creativity (67.0%), and not paying attention to prices and money (64.8%). They score significantly lower on one motivation (change to usual surroundings (85.7%)). In addition, they travel alone (17.0%), with partner and children (25.3%), or with friends (18.1%) more frequently.

Table 2. External crisis-resistant tourists: risk propensity, resistance to change, cancelation behavior and risk shifting.

Variables	Resistant Segment 1 (n=182)	Segments 2,3,4,5 (n=825)	p-value
Do you typically buy trip insurance when making travel reservations?	53.3%	48.0%	.225
Have you ever cancelled a vacation travel booking in its entirety?	20.8%	37.9%	.000
Resistance to change (mean)	7.1	5.9	.000
Risk propensity (mean):			
… physical risk	58.3	47.9	.000
… financial risk	51.5	42.7	.000
… health risk	51.8	40.9	.000
… social risk	57.4	52.7	.022
… risk propensity compared to others	60.3	55.7	.011

Conclusions

The study set out to find empirical evidence for crisis-resistant travel behavior. The results confirm that crisis-resistance in tourists exists, and that behavioral resistance

is a useful measure for it. The results also indicate that there are two dimensions to behavioral resistance, namely ‘going despite’ and ‘not cancelling because’, which are, conceptually, not exact opposites. This complexity is also reflected in the construct’s link with high-risk propensity and high resistance to change, suggesting that both can be possible explanations for crisis-resistant travel behavior. As such, the research provides important insights regarding the theoretical conceptualization and underlying drivers of crisis-resistance, which was identified as missing from previous literature, and offers guidance to the tourism industry on how to identify and communicate with the attractive market segment of crisis-resistant tourists.

The findings further point to tourists reacting differently to internal and external crisis events, and to not all tourists exhibiting general crisis resistance. This supports that while the general risk attitude remains stable (Visser, Krosnick, & Simmons, 2003), risk perceptions can be domain-specific (Roehl & Fesenmaier, 1992) and therefore can lead to different behavioral outcomes. Yet, rather than reflecting established risk domains, the results suggest that a distinction between internal and external events is sufficient to capture the variance.

Importantly, the identified highly crisis-resistant tourists (for both internal and external crisis events) do not necessarily engage in risk shifting; they are not significantly more likely to take out travel insurance than other segments. By conceptualizing and measuring crisis resistance as a behavioral concept related to, but distinct from, a general willingness and a specific propensity to take a variety of risks, but also not a result of risk-shifting strategies, this study provides important contributions to the risk-taking related literature in tourism (Lepp & Gibson, 2008; Pizam, Jeong, Reichel, Boemmel, Lusson, Steynberg, Volo, Kroesbacher, Kucerova

& Montmany, 2004) and adds to the extremely limited bodies of work on the impact of travel insurance purchases (Leggat & Leggat, 2002) and on travel cancelations (Park & Jang, 2014).

The study further aimed at identifying who the crisis-resistant tourists are in order to support marketing-based efforts to increase destination resilience. The rich descriptions of the characteristics of highly crisis-resistant tourists provide insights into their psyche, their travel-related behaviors, and their socio-economic environment. Crisis-resistant tourists engage in adventurous outdoor activities including hiking, horse riding and mountain biking and are less interested in passive activities such as relaxing which is in line with previous studies (Pizam et al., 2004; Roehl & Fesenmaier, 1992). The findings also show that – compared to other tourists – crisis-resistant tourists take more trips a year, consistent with earlier studies (Lepp & Gibson, 2003; Sönmez & Graefe, 1998) which show a negative association between travel experience and risk perceptions. In terms of personality, crisis-resistant tourists are extroverted, supporting the findings of Reisinger and Mavondo (2005) who find extroverted individuals more likely to be risk-tolerant and more frequently engaging in risky activities.

The picture that emerges from the data paints these tourists as highly involved in travel and related planning activities. They fit the prototypical image of an adventure traveler in being more likely young, more extrovert (external crisis-resistant tourists), less agreeable (internal crisis-resistant tourists), willing to take high physical risks, motivated to travel by opportunities related to sports and health, and actively engaged in activities such as mountain biking, horse riding and hiking. Their life is generally exciting—they do not need to escape monotonous surroundings or

constraints imposed by traditional relationships. They therefore fit the conceptualization of the 'allocentric' traveler (Plog, 1991) quite well. Understanding this segment likely means understanding who the first tourists are during or after a crisis event at a destination, which is essential information for crisis management planning. Knowledge of their characteristics is also important for destinations or travel businesses aiming to attract this segment in order to increase their resistance in the event of a crisis, or generally reduce cancelations.

These highly crisis-resistant tourists are an attractive market segment for travel providers, intermediaries and destinations, not only because of their crisis-resistance and because of high spending power, but also because they are highly targetable. They engage in very specific activities at the destination, and attracting them through targeted product development appears to be rather straightforward. They are also highly involved in the travel planning process; therefore, they can be influenced directly through a variety of channels, including social media, which have emerged as critical communication tools in crisis and disaster events (White, 2011). Pizam et al. (2004) find that some nationalities are more interested in risky tourist activities while others are more interested in low-risk activities. According to Kozak, Crotts, and Law (2007), tourists' national culture is associated with their risk perceptions. The current study, however, finds no significant differences between nationalities of resistant and non-resistant segments which can be due to the homogeneous sample – in terms of nationality – used containing respondents from English speaking mature tourist markets.

The media use behaviors of crisis-resistant tourists provide further implications for resilient destination marketing. As noted by Cooper (2006) and Chew and Jahari

(2014), media reports can have a devastating effect on affected destinations. Traditional media, especially TV, have been found to be prone to perpetuate disaster myths (Quarantelli, 1996). While the crisis-resistant tourists use traditional media as information sources, they have a qualitatively different level of awareness based on their widely cast net of information sources. Due to their greater reliance on social media and smaller exposure to opinions of concerned friends and relatives, it is easier to get messages to them that can counteract disaster myths. However, they are also more likely to simply ignore information, which can be an advantage for bringing them to the destination despite a crisis but also a management risk if they ignore warnings.

The present study offers a first exploration of the concept of crisis-resistant tourists. It is limited by the fact that only a small set of possible internal and external crises were investigated. Moreover, some of the items combined crises, which may in fact evoke different reactions from tourists, such as street riots and terrorist attacks. There is a great need to further test the conceptualization, and further characterize the segment of crisis-resistant tourists. One of the major shortcomings of the present study is the reliance on self-reported behavioral data. Basing the segmentation on actual behaviors should be considered for future research in this area. A possible approach would be to observe tourists still visiting in the aftermath of a disaster. Furthermore, this paper focused on behavioral resistance, but insights are also needed on the cognitive and emotional processes that lead up to it.

Acknowledgements

We are grateful to the Australian Research Council (ARC) for supporting our research through ARC projects DP110101347 and DP120103352. We thank Bettina Grün for her feedback on data analysis, Amata Ring for her comments on previous version of this manuscript and Morgan Cole for language editing.

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Appendix 1: Survey questions

Segmentation base – Behavioral resistance

Now we would like to learn more about your past vacation behavior.

Have you ever ...	**Yes**	**No**
... gone on a vacation even though you were sick and your doctor recommended staying at home?	☐	☐
... gone on a vacation despite a family emergency at home that would have required your attention?	☐	☐
... gone on a vacation to a destination that had experienced a terrorist attack or street riots within a week before or during your time of departure?	☐	☐
... gone on a vacation to a destination that had experienced a natural disaster within a week before or during your time of departure?	☐	☐
... gone on a vacation despite major strikes at the destination?	☐	☐

Describe ALL reasons that have made you cancel a travel booking in the past:

	Yes	**No**
Personal health problems/accidents/injuries	☐	☐
Family emergency	☐	☐
Strike at the destination	☐	☐
Terrorist attacks/street riots/political instability	☐	☐
Natural disaster or hazardous weather conditions	☐	☐

Explanatory factors

Risk propensity

Which risks are you willing to take?

1) Some activities involve a "physical" risk such as particular occupations (e.g. underground miner) or sports (e.g. rock-climbing) or transportation (e.g. cycling) – that is, there is a risk of injury or death.

In general, your willingness to accept **physical** risks is ....

Extremely low (0) ---------- Extremely high (100)

2) Some activities involve a "financial" risk, such as gambling (e.g. in casinos), starting a business, investing (e.g. buying shares), and betting (e.g. on horses) – that is, there is a risk of losing money or other assets.

In general, your willingness to accept **financial** risks is ...

Extremely low (0) ---------- Extremely high (100)

3) Some activities involve a "health" risk, such as travelling overseas (e.g. in countries of low hygienic standards) or particular "lifestyle" behaviors (e.g. long sunbathing, unsafe sex, drugs for pleasure) or smoking – that is, there is a risk of catching a harmful disease.

In general, your willingness to accept **health** risks is ...

Extremely low (0)---------- Extremely high

(100)

4) Some activities involve a "social" risk, such as being very outspoken or behaving in an unusual manner (e.g. violating social norms) or accepting public roles (e.g. giving a controversial speech) – that is, there is a risk of losing the respect and acceptance of others and harming one's social status.

In general, your willingness to accept **social** risks is ...

Extremely low (0)---------- Extremely high (100)

How would you rate your general willingness to take risks in comparison to other people, such as friends, peers, colleagues?

I am much less willing to accept risks (0) ---------- I am much more willing to accept risks (100)

Resistance to change

Please indicate whether the following statements describe you.

	Yes	**No**
I generally consider change to be a negative thing.	☐	☐
I'll take a routine day over a day full of unexpected events any time.	☐	☐
I like to do the same old things rather than try new and different ones.	☐	☐
Whenever my life forms a stable routine, I look for ways to change it. (*R*)	☐	☐
I'd rather be bored than surprised.	☐	☐
When I am informed of a change of plans, I tense up a bit.	☐	☐
When things don't go according to plans, it stresses me out.	☐	☐
Changing plans seems like a real hassle to me.	☐	☐
Often, I feel a bit uncomfortable even about changes that may potentially improve my life.	☐	☐
When someone pressures me to change something, I tend to resist it even if I think the change may ultimately benefit me.	☐	☐
I sometimes find myself avoiding changes that I know will be good for me.	☐	☐
Once I've made plans, I'm not likely to change them.	☐	☐
I often change my mind. (*R*)	☐	☐
Once I've come to a conclusion, I'm not likely to change my mind.	☐	☐
I don't change my mind easily.	☐	☐
My views are very consistent over time.	☐	☐

Risk shifting

Do you typically buy trip insurance when making travel reservations?

- ○ Yes
- ○ No

Background variables

General cancelation behavior

Have you ever cancelled a vacation travel booking in its entirety?

- ○ Yes
- ○ No

Travel behaviors and motivations

How many holiday trips away from home do you usually make per year WITHIN YOUR COUNTRY OF RESIDENCE? _____

How many holiday trips away from home do you usually make per year TO ANOTHER COUNTRY? _____

Who do you usually travel with? *Please select only one.*

- ○ Alone
- ○ With partner
- ○ With partner and children
- ○ With friends
- ○ With an organized group

For a typical vacation, how much of the planning is usually done by you personally?

- ○ All of it
- ○ More than half
- ○ About half
- ○ Less than half
- ○ None

Compared to most people you know, how much money do you spend for a typical annual holiday?

- ○ Less than most people I know
- ○ Same as most people I know
- ○ More than most people I know

Compared to most people you know, how much time do you spend planning vacations?

- ○ Less than most people I know
- ○ Same as most people I know
- ○ More than most people I know

What information sources do you typically use to learn about a particular holiday destination before deciding on a holiday?

	Yes	**No**
Don't need any information.	☐	☐
Tour operator or travel agent.	☐	☐
Traditional media (TV, radio, newspapers).	☐	☐
Social media (e.g. Facebook).	☐	☐
Online travel community companies (e.g. Tripadvisor).	☐	☐
Friends and relatives.	☐	☐
Official local, regional or national tourism offices.	☐	☐
Guidebooks.	☐	☐
Tourism suppliers (airlines, hotels, attractions, etc).	☐	☐
Other travelers not personally known to you.	☐	☐
Motoring associations.	☐	☐
Social clubs (e.g. church groups, university clubs, etc).	☐	☐

What is important to you when you are on holiday?

	YES	**NO**	**N/A**
I want to rest and relax.	☐	☐	☐
I am looking for luxury and want to be spoilt.	☐	☐	☐
I want to do sports.	☐	☐	☐
This holiday means excitement, a challenge and special experience to me.	☐	☐	☐
I try not to exceed my planned budget for this holiday.	☐	☐	☐

I want to realize my creativity.	☐	☐	☐
I am looking for a variety of fun and entertainment.	☐	☐	☐
Good company and getting to know people is important to me.	☐	☐	☐
I use my holiday for the health and beauty of my body.	☐	☐	☐
I put much emphasis on free-and-easy-going.	☐	☐	☐
I spend my holiday here, because there are many entertainment facilities.	☐	☐	☐
Being on holiday I do not pay attention to prices and money.	☐	☐	☐
I am interested in the life style of the local people.	☐	☐	☐
The special thing about my holiday is an intense experience of nature.	☐	☐	☐
I am looking for coziness and a familiar atmosphere.	☐	☐	☐
On holiday the efforts to maintain unspoilt surroundings play a major role for me.	☐	☐	☐
It is important to me that everything is organized and I do not have to care about anything.	☐	☐	☐
When I choose a holiday-resort, unspoilt nature and a natural landscape play a major role for me.	☐	☐	☐
Cultural offerings and sights are a crucial factor.	☐	☐	☐
I go on holiday for a change to my usual surroundings.	☐	☐	☐
When I choose a destination, I put much emphasis on a romantic and nostalgic atmosphere.	☐	☐	☐
When I choose a destination, what the destination has to offer is a crucial factor.	☐	☐	☐
When I choose a destination, it is important to me that it caters for my children's needs.	☐	☐	☐
When I choose a destination, it is important to me that I can feel safe.	☐	☐	☐
When I choose a destination, it is important to me that there is little traffic in the village / town.	☐	☐	☐

Please indicate which vacation activities you undertake on a typical vacation.

	A lot	**Sometimes**	**Never**
Playing tennis	☐	☐	☐
Cycling	☐	☐	☐
Mountain biking	☐	☐	☐
Horse riding	☐	☐	☐
Playing golf	☐	☐	☐
Swimming / bathing	☐	☐	☐
Sailing / surfing	☐	☐	☐
Trendy sports (e.g. paragliding, rafting)	☐	☐	☐
Rollerblading / inline-skating	☐	☐	☐
Boat trips	☐	☐	☐
Skiing / Snowboarding	☐	☐	☐
Ice-skating	☐	☐	☐
Going to an indoor swimming pool / to a sauna	☐	☐	☐
Going to a spa	☐	☐	☐
Using health facilities	☐	☐	☐
Mountaineering	☐	☐	☐
Hiking	☐	☐	☐
Going for walks	☐	☐	☐
Participating in organized excursions	☐	☐	☐
Making (not organized) excursions into the near surroundings	☐	☐	☐
Relaxing / doing nothing	☐	☐	☐
Going out for dinner	☐	☐	☐
Going to discos / bars	☐	☐	☐

Shopping	☐	☐	☐
Sightseeing	☐	☐	☐
Going to museums / exhibitions	☐	☐	☐
Going to the theatre, musical, opera	☐	☐	☐
Visiting festivals, concerts	☐	☐	☐
Visiting local and regional events	☐	☐	☐
Posting pictures, status updates on Facebook, Twitter or any other social media website.	☐	☐	☐

Psychographic background

How would you describe yourself?

	Yes	**No**
Panic easily.	☐	☐
Start conversations.	☐	☐
Enjoy hearing new ideas.	☐	☐
Believe that others have good intentions.	☐	☐
Sympathize with others' feelings.	☐	☐
Am filled with doubts about things.	☐	☐
Make plans and stick to them.	☐	☐
Am concerned about others.	☐	☐
Get stressed out easily.	☐	☐
Respect others.	☐	☐
Make friends easily.	☐	☐
Have a vivid imagination.	☐	☐
Don't mind being the center of attention.	☐	☐
Worry about things.	☐	☐
Enjoy thinking about things.	☐	☐
Feel comfortable around people.	☐	☐
Enjoy looking for a deeper meaning in things.	☐	☐
Trust what people say.	☐	☐
Pay attention to details.	☐	☐
Carry out my plans.	☐	☐
Fear for the worst.	☐	☐
Am always prepared.	☐	☐
Talk a lot to different people at parties.	☐	☐
Get excited by new ideas.	☐	☐
Am exacting in my work.	☐	☐

Socio-demographic background

Are you…

- ○ Male
- ○ Female

In what year were you born?

<1900 to 1996>

☐ Prefer not to state

What is the highest level of education you have completed? *Please select one only.*

- ○ No formal education
- ○ Primary school

- ○ Secondary school
- ○ Technical/Vocational training or apprenticeship
- ○ University degree, undergraduate
- ○ University degree, postgraduate
- ○ Not stated

Which of the following best describes your current relationship status? *Please select one only.*

- ○ Not currently in a relationship
- ○ In a relationship but not living together
- ○ Living with your partner
- ○ Married
- ○ Not stated

Which of the following best describes your employment status? *Please select one only.*

- ○ Working full-time
- ○ Working part-time or casually
- ○ Unemployed but looking for work
- ○ Homemaker
- ○ Retired
- ○ Student

Which currency is your income paid in? _____ [DROP DOWN MENU]

Are you paid weekly, fortnightly, or monthly? [DROP DOWN MENU]

What is your pay per [‘week’ or ‘fortnight’ or ‘month’ as selected in previous question]_____?

Appendix 2: Detailed profile of internal crisis-resistant tourists

Table 3. Socio-demographic and psychographic background variables.

Variables	**Resistant** Segments 1,3,5 (n=498)	**Non-resistant** Segments 2,4,6 (n=491)	p-value
Age (median)	41	50	.000
Female	47.6%	46.2%	.715
Relationship status			
… Not currently in a relationship	22.7%	29.7%	
… In a relationship but not living together	13.7%	9.4%	.000
… Living with your partner	17.9%	10.8%	
… Married	43.8%	48.9%	
Nationality			
… Australia	25.7%	18.7%	
… Canada	23.3%	24.2%	.064
… United Kingdom	25.3%	29.1%	
… United States of America	25.7%	27.9%	
Employment status			
… Working full-time	49.2%	34.2%	.000
… Working part-time or casually	15.5%	13.8%	
… Retired	14.1%	27.3%	
Education			
… university degree, postgraduate	19.5%	16.3%	
… university degree, undergraduate	26.5%	26.9%	.498
… technical/Vocational training or apprenticeship	23.9%	25.9%	
… secondary school	21.9%	25.3%	
Annual income (median)	41,600 AUD	39,000 AUD	.594
Personality traits (mean)			
… neuroticism	2.34	2.16	.102
… extraversion	3.34	3.30	.843
… openness to experience	4.20	4.29	.425
… agreeableness	4.07	4.21	.033
… conscientiousness	4.07	4.16	.324

Table 4. Travel behavior background variables.

Variables	**Resistant** Segments 1,3,5 (n=498)	**Non-resistant** Segments 2,4,6 (n=491)	p-value
What information sources do you typically use to learn about a particular holiday destination before deciding on a holiday?			
… don't need any information	28.1%	26.9%	.717
… tour operator or travel agent	56%	55.2%	.842
… traditional media (TV, radio, newspaper)	58.2%	54.6%	.274
… social media	44.6%	30.1%	.000
… online travel community companies (e.g. TripAdvisor)	61.6%	62.1%	.930
… friends and relatives	78.3%	79.8%	.609
… official local, regional or national tourism offices	61.0%	59.5%	.659
… guidebooks	63.9%	66.4%	.440
… tourism suppliers (airlines, hotels, attractions)	66.1%	67.8%	.603
… other travelers not personally known to you	44.0%	30.8%	.000
… motoring associations	37.1%	32.2%	.115
… social clubs (church groups, university clubs, etc.)	30.7%	21.0%	.000
Please indicate which vacation activities you undertake on a typical vacation:			
… Mountain biking	39.4%	26.1%	.000
… Playing Golf	37.3%	28.5%	.003
… Playing Tennis	41.0%	28.3%	.000
… Skiing/Snowboarding	42.6%	29.9%	.000
… Mountaineering	45.2%	28.9%	.000
… Trendy sports	45.0%	28.5%	.000
… Sailing/surfing	48.6%	33.6%	.000
… Horse riding	47.4%	36.7%	.000
… Cycling	53.0%	38.1%	.000
… Posting pictures, status updates on Facebook, Twitter or any other social media website.	59.2%	43.8%	.000
… Going to a spa	63.5%	54.0%	.003
… Hiking	65.5%	55.6%	.001
… Going to discos / bars	66.7%	55.4%	.000
… Going to the theatre, musical, opera	71.9%	69.0%	.362
… Participating in organised excursions	73.9%	76.0%	.497
… Going to an indoor swimming pool / to a sauna	83.5%	77.8%	.027

… Boat trips	80.1%	78.6%	.612
… Visiting festivals, concerts	83.1%	81.5%	.546
… Swimming / bathing	87.3%	83.3%	.087
… Going to museums/exhibitions	86.7%	90.6%	.067
… Making (not organised) excursions into the near surroundings	87.1%	90.8%	.080
… Visiting local and regional events	90.6%	93.5%	.114
… Shopping	94.0%	94.9%	.616
… Going for walks	92.8%	95.3%	.119
… Relaxing / doing nothing	93.6%	96.7%	.030
… Sightseeing	93.4%	98.0%	.000
… Going out for dinner	96.8%	98.6%	.098
Motivations			
… I want to do sports.	42.4%	25.1%	.000
… I use my holiday for the health and beauty of my body.	58.2%	47.5%	.000
… I want to realise my creativity.	62.7%	57.4%	.107
… Being on holiday I do not pay attention to prices and money.	62.9%	50.7%	.000
… I am looking for luxury and want to be spoilt.	61.2%	57.4%	.247
… When I choose a destination, I put much emphasis on a romantic and nostalgic atmosphere.	66.7%	62.3%	.173
… I am looking for cosiness and a familiar atmosphere.	67.1%	68.6%	.645
… The special thing about my holiday is an intense experience of nature.	71.1%	65.0%	.046
… This holiday means excitement, a challenge and special experience to me.	77.5%	75.4%	.469
… Good company and getting to know people is important to me.	82.7%	80.2%	.354
… On holiday the efforts to maintain unspoilt surroundings play a major role for me.	78.5%	80.2%	.552
… When I choose a holiday-resort, unspoilt nature and a natural landscape play a major role for me.	81.5%	83.7%	.411
… I am interested in the life style of the local people.	81.1%	84.1%	.247
… I am looking for a variety of fun and entertainment.	86.5%	84.1%	.321
… Cultural offerings and sights are a crucial factor.	83.1%	86.2%	.219
… I want to rest and relax.	90.8%	91.9%	.620
… I go on holiday for a change to my usual surroundings.	88.2%	90.8%	.203
… I put much emphasis on free-and-easy-going.	92.0%	95.1%	.060
How many holiday trips away from home do you usually make per year within your country of residence? (mean)	4.1	2.7	.114
How many holiday trips away from home do you usually	2.6	1.2	.010

make per year to another country (mean)			
Compared to most people you know, how much money do you spend for a typical annual holiday?			.046
… less than most people I know	26.7%	33.6%	
… more than most people I know	16.3%	16.3%	
Compared to most people you know, how much time do you spend planning vacations?			.008
… less than most people I know	20.7%	28.1%	
… more than most people I know	25.9%	27.1%	
For a typical vacation, how much of the planning is usually done by you personally?			.009
… more than half	32.3%	36.3%	
… all of it	48.2%	39.7%	
Who do you usually travel with?			.014
… Alone	13.3%	14.5%	
… With partner	41.0%	44.2%	
… With partner and children	30.5%	21.6%	
… With Friends	13.3%	18.1%	
… With an organized group	2.0%	1.6%	

Appendix 3: Detailed profile of external crisis-resistant tourists

Table 5. Socio-demographic and psychographic background variables.

Variables	**Resistant** Segment 1 (n=182)	**Others** Segments 2,3,4,5 (n=825)	p-value
Age (median)	39	47	.000
Female	39.0%	44.7%	.185
Relationship status			.292
… Not currently in a relationship	25.3%	26.5%	
… In a relationship but not living together	14.3%	10.4%	
… Living with your partner	15.4%	13.6%	
… Married	42.3%	48.0%	
Nationality			.989
… Australia	22.5%	23.3%	
… Canada	24.2%	24.7%	
… United Kingdom	29.7%	28.6%	
… United States of America	23.6%	23.4%	
Employment status			.000
… Working full-time	60.4%	40.5%	
… Working part-time or casually	11.0%	15.9%	
… Retired	11.5%	22.7%	
Education			.051
… university degree, postgraduate	23.6%	16.8%	
… university degree, undergraduate	32.4%	27.9%	
… technical/Vocational training or apprenticeship	17.0%	24.7%	
… secondary school	19.8%	25.1%	
Annual income (median)	47,622 AUD	41,600 AUD	.333
Personality traits (mean)			
… neuroticism	2.16	1.96	.201
… extraversion	3.55	3.27	.019
… openness to experience	4.19	4.29	.261
… agreeableness	4.09	4.15	.792
… conscientiousness	4.20	4.09	.287

Table 6. Travel behavior background variables.

Variables	**Resistant** Segment 1 (n=182)	**Others** Segments 2,3,4,5 (n=825)	p-value
What information sources do you typically use to learn about a particular holiday destination before deciding on a holiday?			
… don't need any information	34.6%	24.4%	.005
… tour operator or travel agent	58.8%	56.6%	.648
… traditional media (TV, radio, newspaper)	61.5%	54.3%	.089
… social media	48.4%	34.8%	.000
… online travel community companies (e.g. TripAdvisor)	71.4%	64.2%	.078
… friends and relatives	70.9%	81.0%	.003
… official local, regional or national tourism offices	67.6%	60.5%	.089
… guidebooks	70.3%	67.6%	.536
… tourism suppliers (airlines, hotels, attractions)	72.5%	67.9%	.255
… other travelers not personally known to you	53.8%	34.8%	.000
… motoring associations	41.2%	30.9%	.009
… social clubs (church groups, university clubs, etc.)	34.6%	21.8%	.000
Please indicate which vacation activities you undertake on a typical vacation:			
… Mountain biking	51.1%	26.8%	.000
… Playing Golf	47.8%	27.3%	.000
… Playing Tennis	54.9%	29.2%	.000
… Skiing/Snowboarding	51.6%	31.9%	.000
… Mountaineering	53.3%	32.7%	.000
… Trendy sports	58.8%	35.4%	.000
… Sailing/surfing	56.6%	37.1%	.000
… Horse riding	57.1%	40.1%	.000
… Cycling	62.6%	42.3%	.000
… Posting pictures, status updates on Facebook, Twitter or any other social media website.	60.4%	49.5%	.009
… Going to a spa	68.1%	54.9%	.001
… Hiking	75.3%	59.9%	.000
… Going to discos / bars	68.7%	62.4%	.132
… Going to the theatre, musical, opera	76.9%	70.7%	.108

… Participating in organised excursions	79.1%	77.5%	.695
… Going to an indoor swimming pool / to a sauna	83.5%	81.2%	.534
… Boat trips	82.4%	82.2%	1.00
… Visiting festivals, concerts	81.9%	82.9%	.819
… Swimming / bathing	91.2%	85.8%	.068
… Going to museums/exhibitions	88.5%	90.9%	.379
… Making (not organised) excursions into the near surroundings	91.8%	90.8%	.786
… Visiting local and regional events	92.3%	93.6%	.647
… Shopping	91.8%	94.9%	.136
… Going for walks	94.0%	95.0%	.683
… Relaxing / doing nothing	93.4%	94.8%	.574
… Sightseeing	94.0%	96.0%	.307
… Going out for dinner	96.7%	97.3%	.826
Motivations			
… I want to do sports.	49.5%	27.3%	.000
… I use my holiday for the health and beauty of my body.	59.3%	48.1%	.007
… I want to realise my creativity.	67.0%	56.7%	.013
… Being on holiday I do not pay attention to prices and money.	64.8%	56.4%	.044
… I am looking for luxury and want to be spoilt.	60.4%	56.6%	.387
… When I choose a destination, I put much emphasis on a romantic and nostalgic atmosphere.	65.9%	63.0%	.514
… I am looking for cosiness and a familiar atmosphere.	68.1%	61.5%	.109
… The special thing about my holiday is an intense experience of nature.	74.2%	67.6%	.101
… This holiday means excitement, a challenge and special experience to me.	79.7%	77.9%	.679
… Good company and getting to know people is important to me.	77.5%	81.0%	.331
… On holiday the efforts to maintain unspoilt surroundings play a major role for me.	76.4%	81.9%	.103
… When I choose a holiday-resort, unspoilt nature and a natural landscape play a major role for me.	77.5%	83.8%	.055
… I am interested in the life style of the local people.	80.8%	85.5%	.141
… I am looking for a variety of fun and entertainment.	83.5%	85.5%	.582
… Cultural offerings and sights are a crucial factor.	84.6%	87.3%	.402
… I want to rest and relax.	86.3%	89.6%	.245
… I go on holiday for a change to my usual surroundings.	85.7%	91.9%	.013
… I put much emphasis on free-and-easy-going.	90.7%	94.2%	.113

How many holiday trips away from home do you usually make per year within your country of residence? (mean)	4.0	3.3	.005
How many holiday trips away from home do you usually make per year to another country (mean)	3.1	2.0	.000
Compared to most people you know, how much money do you spend for a typical annual holiday?			.738
… less than most people I know	27.5%	28.4%	
… more than most people I know	23.1%	20.5%	
Compared to most people you know, how much time do you spend planning vacations?			.096
… less than most people I know	16.5%	23.6%	
… more than most people I know	29.1%	28.4%	
For a typical vacation, how much of the planning is usually done by you personally?			.001
… more than half	28.6%	35.3%	
… all of it	57.1%	41.5%	
Who do you usually travel with?			.0315
… Alone	17.0%	14.8%	
… With partner	39.0%	45.9%	
… With partner and children	25.3%	22.1%	
… With Friends	18.1%	15.5%	
… With an organized group	0.5%	1.7%	

Appendix 4: Detailed profile of all the individual segments using internal crises variables

Table 7. Risk propensity, resistance to change, cancelation behavior and risk shifting.

	Resistant			Non-resistant			
Variables	Internal Crisis-resistant Segment (n=109)	Family Emergency-resistant Segment (n=126)	Sickness-resistant Segment (n=263)	Internal Crisis-non-resistant Segment (n=238)	Family Emergency-non-resistant Segment (n=128)	Sickness-non-resistant Segment (n=125)	p-value
Do you typically buy trip insurance when making travel reservations?	52.3%	45.2%	38.0%	46.2%	49.2%	48.8%	.098
Have you ever cancelled a vacation travel booking in its entirety?	17.4%	10.3%	6.5%	100%	100%	100%	.000
Resistance to change (mean)	8.7	6.9	6.3	6.1	5.8	6.4	.000
Risk propensity (mean):							
… physical risk	57.7	49.2	50.0	46.5	44.5	35.6	.000
… financial risk	53.0	45.2	42.9	42.4	41.1	35.1	.000
… health risk	51.5	46.2	44.3	38.3	35.6	32.4	.000
… social risk	57.2	53.0	55.3	53.5	50.0	47.9	.010
… risk propensity compared to others	59.9	50.8	56.7	54.9	53.3	47.7	.000

Table 8. Socio-demographic and psychographic background variables.

	Resistant			Non-resistant			
Variables	Internal Crisis-resistant Segment (n=109)	Family Emergency-resistant Segment (n=126)	Sickness-resistant Segment (n=263)	Internal Crisis-non-resistant Segment (n=238)	Family Emergency-non-resistant Segment (n=128)	Sickness-non-resistant Segment (n=125)	p-value
Age (median)	35	43	43	52	50	49	.000
Female	36.7%	49.2%	51.3%	47.1%	42.2%	48.8%	.144
Relationship status							.026
… Not currently in a relationship	22.0%	24.6%	22.1%	30.7%	25.8%	32.0%	
… In a relationship but not living together	18.3%	8.7%	14.1%	10.5%	7.8%	8.8%	
… Living with your partner	20.2%	16.7%	17.5%	10.9%	12.5%	8.8%	
… Married	38.5%	46.0%	44.9%	46.2%	53.1%	49.6%	
Nationality							0.027
… Australia	27.5%	23.8%	25.9%	19.7%	16.4%	19.2%	
… Canada	20.2%	24.6%	24.0%	26.1%	21.1%	24.0%	
… United Kingdom	26.6%	29.4%	22.8%	21.4%	39.8%	32.8%	
… United States of America	25.7%	22.2%	27.4%	32.8%	22.7%	24.0%	
Employment status							.000
… Working full-time	65.1%	45.2%	44.5%	31.1%	42.2%	32.0%	
… Working part-time or casually	16.5%	18.3%	13.7%	13.4%	12.5%	16.0%	

… Retired	8.3%	18.3%	14.4%	28.2%	25.0%	28.0%	
Education							
… university degree, postgraduate	28.4%	19.0%	16.0%	14.7%	16.4%	19.2%	
… university degree, undergraduate	21.1%	27.8%	28.1%	27.7%	26.6%	25.6%	.620
… technical/ Vocational training or apprenticeship	19.3%	27.0%	24.3%	27.3%	25.0%	24.0%	
… secondary school	22.0%	16.7%	24.3%	22.7%	28.1%	27.2%	
Annual income (median)	52,000 AUD	49,564 AUD	34,729 AUD	41,422 AUD	37,383 AUD	38,661 AUD	.078
Personality traits (mean)							
… neuroticism	2.76	2.22	2.23	2.23	2.09	2.10	.050
… extraversion	3.78	3.22	3.21	3.48	3.18	3.09	.015
… openness to experience	4.06	4.03	4.34	4.42	4.28	4.05	.001
… agreeableness	3.96	4.03	4.13	4.18	4.13	4.16	.837
… conscientiousness	4.02	3.98	4.14	4.15	4.25	4.32	.055

Table 9. Travel behavior background variables:

	Resistant			Non-resistant			
Variables	Internal Crisis-resistant Segment (n=109)	Family Emergency-resistant Segment (n=126)	Sickness-resistant Segment (n=263)	Internal Crisis-non-resistant Segment (n=238)	Family Emergency-non-resistant Segment (n=128)	Sickness-non-resistant Segment (n=125)	p-value
What information sources do you typically use to learn about a particular holiday destination before deciding on a holiday?							
… don't need any information	43.1%	24.6%	23.6%	31.5%	18.8%	26.4%	.000
… tour operator or travel agent	66.1%	59.5%	50.2%	54.2%	57.0%	55.2%	.107
… traditional media (TV, radio, newspaper)	68.8%	54.8%	55.5%	59.7%	50.8%	48.8%	.026
… social media	69.7%	38.9%	36.9%	37.8%	26.6%	19.2%	.000
… online travel community companies (e.g. TripAdvisor)	67.0%	57.9%	61.2%	60.1%	67.2%	60.8%	.550
… friends and relatives	77.1%	80.2%	77.9%	82.4%	78.9%	76.0%	.727
… official local, regional or national tourism offices	65.1%	62.7%	58.6%	62.6%	61.7%	51.2%	.247
… guidebooks	65.1%	64.3%	63.1%	67.6%	64.8%	65.6%	.945
… tourism suppliers (airlines, hotels, attractions)	66.1%	67.5%	65.4%	65.1%	67.2%	73.6%	.669
… other travelers not personally known to you	59.6%	49.2%	35.0%	35.7%	25.0%	27.2%	.000

… motoring associations	52.3%	40.5%	29.3%	42.4%	25.8%	19.2%	.000
… social clubs (church groups, university clubs, etc.)	58.7%	23.0%	22.8%	26.9%	15.6%	15.2%	.000
Please indicate which vacation activities you undertake on a typical vacation:							
… Mountain biking	64.2%	35.7%	30.8%	33.2%	20.3%	18.4%	.000
… Playing Golf	57.8%	34.9%	30.0%	35.3%	26.6%	17.6%	.000
… Playing Tennis	60.6%	34.9%	35.7%	33.6%	24.2%	22.4%	.000
… Skiing/ Snowboarding	64.2%	38.9%	35.4%	34.5%	30.5%	20.8%	.000
… Mountaineering	70.6%	40.5%	36.9%	33.6%	28.1%	20.8%	.000
… Trendy sports	67.0%	40.5%	38.0%	32.4%	30.5%	19.2%	.000
… Sailing/surfing	67.9%	45.2%	42.2%	40.3%	35.9%	18.4%	.000
… Horse riding	64.2%	41.3%	43.3%	40.8%	40.6%	24.8%	.000
… Cycling	72.5%	50.0%	46.4%	43.7%	35.9%	29.6%	.000
… Posting pictures, status updates on Facebook, Twitter or any other social media website.	72.5%	53.2%	56.7%	47.9%	43.0%	36.8%	.000
… Going to a spa	74.3%	66.7%	57.4%	62.2%	50.0%	42.4%	.000
… Hiking	73.4%	65.9%	62.0%	55.5%	57.8%	53.6%	.011
… Going to discos / bars	77.1%	61.1%	65.0%	59.2%	58.6%	44.8%	.000
… Going to the theatre, musical, opera	79.8%	72.1%	68.4%	73.9%	67.2%	61.6%	.034
… Participating in organised excursions	79.8%	74.6%	71.1%	72.7%	82.8%	75.2%	.139
… Going to an indoor swimming pool / to a sauna	82.6%	77.8%	86.7%	79.4%	76.6%	76.0%	.064
… Boat trips	81.7%	78.6%	80.2%	76.9%	85.2%	75.2%	.374
… Visiting festivals, concerts	84.4%	81.0%	83.7%	84.5%	79.7%	77.6%	.539

… Swimming / bathing	92.7%	81.7%	87.8%	85.3%	81.2%	81.6%	.065
… Going to museums/exhibitions	83.5%	88.1%	87.5%	91.2%	90.6%	89.6%	.365
… Making (not organised) excursions into the near surroundings	89.0%	83.3%	88.2%	89.5%	91.4%	92.8%%	.224
… Visiting local and regional events	89.9%	86.5%	92.8%	94.1%	94.5%	91.2%	.121
… Shopping	91.7%	92.1%	95.8%	95.4%	96.9%	92.0%	.215
… Going for walks	93.6%	91.3%	93.2%	95.0%	97.7%	93.6%	.356
… Relaxing / doing nothing	93.6%	91.3%	94.7%	97.1%	96.9%	96.0%	.172
… Sightseeing	91.7%	92.9%	94.3%	97.9%	100%	96.0%	.006
… Going out for dinner	95.4%	95.2%	98.1%	98.3%	100%	97.6%	.092
Motivations							
… I want to do sports.	59.6%	36.5%	38.0%	28.6%	24.2%	19.2%	.000
… I use my holiday for the health and beauty of my body.	74.3%	53.2%	54.0%	52.5%	43.8%	41.6%	.000
… I want to realise my creativity.	78.9%	53.2%	60.5%	60.9%	50.8%	57.6%	.000
… Being on holiday I do not pay attention to prices and money.	68.8%	57.1%	63.1%	50.4%	54.7%	47.2%	.001
… I am looking for luxury and want to be spoilt.	74.3%	56.3%	58.2%	60.1%	56.2%	53.6%	.023
… When I choose a destination, I put much emphasis on a romantic and nostalgic atmosphere.	75.2%	64.3%	64.3%	63.9%	59.4%	62.4%	.203
… I am looking for cosiness and a familiar atmosphere.	76.1%	62.7%	65.4%	73.1%	67.2%	61.6%	.051
… The special thing about my holiday is an intense experience of nature.	78.9%	71.4%	67.7%	66.4%	64.1%	63.2%	.102
… This holiday means excitement, a	85.3%	70.6%	77.6%	76.9%	75.0%	72.8%	.134

challenge and special experience to me.							
… Good company and getting to know people is important to me.	81.7%	79.4%	84.8%	82.4%	81.2%	75.2%	.338
… On holiday the efforts to maintain unspoilt surroundings play a major role for me.	80.7%	77.0%	78.3%	79.4%	87.5%	74.4%	.168
… When I choose a holiday-resort, unspoilt nature and a natural landscape play a major role for me.	81.7%	82.5%	81.0%	84.5%	85.9%	80.0%	.747
… I am interested in the life style of the local people.	80.7%	78.6%	82.5%	82.4%	88.3%	83.2%	.465
… I am looking for a variety of fun and entertainment.	89.0%	82.5%	87.5%	85.3%	82.8%	83.2%	.549
… Cultural offerings and sights are a crucial factor.	81.7%	82.5%	84.0%	83.2%	90.6%	87.2%	.327
… I want to rest and relax.	87.2%	88.1%	93.5	92.4%	92.2%	90.4%	.279
… I go on holiday for a change to my usual surroundings.	82.6%	83.3%	92.8%	87.8%	95.3%	92.0%	.001
… I put much emphasis on free-and-easy-going.	89.0%	87.3%	95.4%	94.1%	94.5%	97.6%	.004
How many holiday trips away from home do you usually make per year within your country of residence? (mean)	5.7	5.5	2.7	3.4	2.1	2.1	.011
How many holiday trips away from home do you usually make per year to another country (mean)	4.5	2.9	1.7	1.4	1.0	1.0	.000
Compared to most people you know, how much money do you spend for a typical annual holiday?							.143
… less than most people I know	19.3%	24.6%	30.8%	35.7%	29.7%	33.6%	

… more than most people I know	14.7%	17.5%	16.3%	14.7%	17.2%	18.4%	
Compared to most people you know, how much time do you spend planning vacations?							.046
… less than most people I know	21.1%	18.3%	21.7%	31.1%	24.2%	26.4%	
… more than most people I know	23.9%	23.0%	28.1%	22.3%	31.2%	32.0%	
For a typical vacation, how much of the planning is usually done by you personally?							.008
… more than half	32.1%	31.7%	32.7%	38.7%	35.9%	32.0%	
… all of it	56.9%	45.2%	46.0%	36.6%	39.1%	46.4%	
Who do you usually travel with?							.068
… Alone	16.5%	12.7%	12.2%	15.1%	8.6%	19.2%	
… With partner	41.3%	42.9%	39.9%	42.9%	42.2%	48.8%	
… With partner and children	29.4%	31.0%	30.8%	21.8%	25.0%	17.6%	
… With Friends	11.9%	12.7%	14.1%	18.9%	22.7%	12.0%	
… With an organized group	0.9%	0.8%	3.0%	1.3%	1.6%	2.4%	

Appendix 5: Detailed profile of all the individual segments using external crises variables

Table 10. Risk propensity, resistance to change, cancelation behavior and risk shifting.

	Resistant				Non-resistant	
Variables	External Crisis-resistant Segment (n=182)	Natural Disaster-resistant Segment (n=207)	Strike-resistant Segment (n=236)	Terrorist Attack-resistant Segment (n=213)	External Crisis-non-resistant Segment (n=169)	p-value
Do you typically buy trip insurance when making travel reservations?	53.3%	51.2%	49.2%	47.9%	42.6%	.328
Have you ever cancelled a vacation travel booking in its entirety?	20.9%	18.8%	25.0%	21.6%	100%	.000
Resistance to change (mean)	7.1	6.1	5.5	5.9	6.3	.000
Risk Propensity (mean):						
… physical risk	58.3	47.7	47.2	49.6	46.9	.000
… financial risk	51.5	40.5	42.0	42.5	46.7	.000
… health risk	51.8	41.5	37.7	43.3	41.7	.000
… social risk	57.4	50.9	52.1	56.0	51.5	.030
… risk propensity compared to others	60.3	54.1	54.5	58.7	55.9	.009

Table 11. Socio-demographic and psychographic background variables.

	Resistant				Non-resistant	
Variables	External Crisis-resistant Segment (n=182)	Natural Disaster-resistant Segment (n=207)	Strike-resistant Segment (n=236)	Terrorist Attack-resistant Segment (n=213)	External Crisis-non-resistant Segment (n=169)	p-value
Age (median)	39	43	48	46	47	.000
Female	39.0%	46.9%	41.9%	48.8%	40.8 %	.230
Relationship status						.328
… Not currently in a relationship	25.3%	25.1%	25.8%	27.2%	28.4%	
… In a relationship but not living together	14.3%	13.5%	6.8%	13.6%	7.7%	
… Living with your partner	15.4%	10.6%	16.5%	13.6%	13.0%	
… Married	42.3%	49.3%	50.0%	43.7%	49.1%	
Nationality						.000
… Australia	22.5%	23.2%	21.6%	26.8%	21.3%	
… Canada	24.2%	27.1%	26.7%	19.2%	26.0%	
… United Kingdom	29.7%	25.1%	31.8%	38.5%	16.0%	
… United States of America	23.6%	24.6%	19.9%	15.5%	36.7%	
Employment status						.001
… Working full-time	60.4%	42.5%	44.1%	40.8%	32.5%	
… Working part-time or casually	11.0%	18.4%	11.9%	19.2%	14.2%	
… Retired	11.5%	19.3%	26.3%	18.8%	26.6%	

Education						
… university degree, postgraduate	23.6%	13.5%	16.9%	17.4%	20.1%	
… university degree, undergraduate	32.4%	25.6%	32.6%	26.3%	26.0%	.151
… technical/Vocational training or apprenticeship	17.0%	28.0%	21.6%	27.2%	21.9%	
… secondary school	19.8%	28.5%	24.2%	24.4%	23.1%	
Annual income (median)	47,622 AUD	41,600 AUD	52,000 AUD	34,605 AUD	39,000 AUD	.094
Personality traits (mean)						
… neuroticism	2.16	2.07	1.78	1.93	2.14	.154
… extraversion	3.55	3.07	3.36	3.26	3.39	.019
… openness to experience	4.19	4.24	4.39	4.22	4.32	.312
… agreeableness	4.09	4.17	4.31	4.05	4.02	.020
… conscientiousness	4.20	4.06	4.22	3.90	4.20	.027

Table 12. Travel behavior background variables:

	Resistant				Non-resistant	
Variables	External Crisis-resistant Segment (n=182)	Natural Disaster-resistant Segment (n=207)	Strike-resistant Segment (n=236)	Terrorist Attack-resistant Segment (n=213)	External Crisis-non-resistant Segment (n=169)	p-value
What information sources do you typically use to learn about a particular holiday destination before deciding on a holiday?						
… don't need any information	34.6%	21.7%	22.9%	24.9%	29.0%	.026
… tour operator or travel agent	58.8%	50.2%	58.9%	58.7%	58.6%	.301
… traditional media (TV, radio, newspaper)	61.5%	48.8%	56.8%	52.1%	60.4%	.055
… social media	48.4%	32.9%	33.1%	29.1%	46.7%	.000
… online travel community companies (e.g. TripAdvisor)	71.4%	62.8%	68.6%	62.4%	62.1%	.180
… friends and relatives	70.9%	79.7%	83.5%	77.5%	83.4%	.013
… official local, regional or national tourism offices	67.6%	58.5%	65.3%	57.3%	60.4%	.150
… guidebooks	70.3%	65.7%	67.4%	66.7%	71.6%	.703
… tourism suppliers (airlines, hotels, attractions)	72.5%	69.6%	72.0%	63.8%	65.1%	.207
… other travelers not personally known to you	53.8%	35.3%	33.9%	35.7%	34.3%	.000
… motoring associations	41.2%	28.0%	35.6%	24.4%	36.1%	.002
… social clubs (church groups, university clubs, etc.)	34.6%	23.2%	21.6%	15.5%	28.4%	.000

Please indicate which vacation activities you undertake on a typical vacation:						
… Mountain biking	51.1%	28.5%	21.6%	25.4%	33.7%	.000
… Playing Golf	47.8%	27.5%	26.7%	20.7%	36.1%	.000
… Playing Tennis	54.9%	26.1%	26.7%	28.2%	37.9%	.000
… Skiing/Snowboarding	51.6%	30.0%	28.8%	31.9%	38.5%	.000
… Mountaineering	53.3%	35.7%	27.1%	29.6%	40.8%	.000
… Trendy sports	58.8%	39.1%	32.2%	31.0%	40.8%	.000
… Sailing/surfing	56.6%	35.3%	35.6%	34.3%	45.0%	.000
… Horse riding	57.1%	40.6%	38.1%	37.1%	46.2%	.000
… Cycling	62.6%	46.4%	40.7%	39.0%	43.8%	.000
… Posting pictures, status updates on Facebook, Twitter or any other social media website.	60.4%	48.3%	47.5%	50.7%	52.1%	.081
… Going to a spa	68.1%	54.1%	50.4%	53.1%	64.5%	.000
… Hiking	75.3%	65.2%	58.9%	54.5%	61.5%	.000
… Going to discos / bars	68.7%	58.9%	61.4%	65.7%	63.9%	.300
… Going to the theatre, musical, opera	76.9%	65.2%	72.5%	71.8%	73.4%	.034
… Participating in organised excursions	79.1%	78.7%	76.7%	79.8%	74.0%	.664
… Going to an indoor swimming pool / to a sauna	83.5%	81.2%	79.2%	78.9%	87.0%	.225
… Boat trips	82.4%	83.6%	85.2%	85.0%	72.8%	.010
… Visiting festivals, concerts	81.9%	82.6%	83.5%	80.3%	85.8%	.699
… Swimming / bathing	91.2%	85.5	88.6%	84.0%	84.6%	.188
… Going to museums/exhibitions	88.5%	88.9%	91.9%	89.7%	93.5%	.406
… Making (not organised) excursions into the near surroundings	91.8%	88.9%	94.9%	90.6%	87.6%	.087

… Visiting local and regional events	92.3%	91.3%	96.2%	92.0%	94.7%	.210
… Shopping	91.8%	92.3%	96.2%	95.8%	95.3%	.162
… Going for walks	94.0%	96.1%	96.6%	92.0%	95.3%	.196
… Relaxing / doing nothing	93.4%	94.7%	97.0%	91.5%	95.9%	.108
… Sightseeing	94.0%	94.2%	98.7%	94.8%	95.9%	.091
… Going out for dinner	96.7%	96.6%	98.3%	97.7%	96.4%	.735
Motivations						
… I want to do sports.	49.5%	31.4%	22.5%	24.4%	32.5%	.000
… I use my holiday for the health and beauty of my body.	59.3%	47.8%	41.5%	45.1%	61.5%	.000
… I want to realise my creativity.	67.0%	55.6%	55.9%	51.2%	66.3%	.003
… Being on holiday I do not pay attention to prices and money.	64.8%	57.0%	55.5%	59.2%	53.3%	.210
… I am looking for luxury and want to be spoilt.	60.4%	50.7%	57.2%	56.3%	63.3%	.137
… When I choose a destination, I put much emphasis on a romantic and nostalgic atmosphere.	65.9%	65.2%	62.7%	54.0%	72.2%	.005
… I am looking for cosiness and a familiar atmosphere.	68.1%	60.4%	62.3%	51.2%	74.6%	.000
… The special thing about my holiday is an intense experience of nature.	74.2%	72.9%	66.1%	61.0%	71.6%	.021
… This holiday means excitement, a challenge and special experience to me.	79.7%	77.3%	79.7%	75.1%	79.9%	.718
… Good company and getting to know people is important to me.	77.5%	81.6%	83.5%	76.1%	82.8%	.216
… On holiday the efforts to maintain unspoilt surroundings play a major role for me.	76.4%	80.2%	82.2%	81.2%	84.6%	.370
… When I choose a holiday-resort, unspoilt nature	77.5%	85.5%	83.5%	79.8%	87.0%	.088

and a natural landscape play a major role for me.						
… I am interested in the life style of the local people.	80.8%	85.5%	85.6%	85.9%	84.6%	.619
… I am looking for a variety of fun and entertainment.	83.5%	85.5%	88.1%	79.3%	89.3%	.039
… Cultural offerings and sights are a crucial factor.	84.6%	85.5%	91.1%	86.9%	84.6%	.233
… I want to rest and relax.	86.3%	92.3%	90.3%	83.1%	93.5%	.004
… I go on holiday for a change to my usual surroundings.	85.7%	93.7%	95.3%	88.7%	88.8%	.003
… I put much emphasis on free-and-easy-going.	90.7%	93.2%	96.6%	92.0%	94.7%	.116
How many holiday trips away from home do you usually make per year within your country of residence? (mean)	4.0	3.6	3.1	3.0	3.6	.024
How many holiday trips away from home do you usually make per year to another country (mean)	3.1	2.6	1.6	2.4	1.4	.000
Compared to most people you know, how much money do you spend for a typical annual holiday?						.967
… less than most people I know	27.5%	27.5%	27.5%	29.6%	29.0%	
… more than most people I know	23.1%	21.7%	21.6%	20.7%	17.2%	
Compared to most people you know, how much time do you spend planning vacations?						.254
… less than most people I know	16.5%	22.7%	26.3%	20.2%	25.4%	
… more than most people I know	29.1%	26.6%	30.5%	30.5%	24.9%	
For a typical vacation, how much of the planning is usually done by you personally?						.005
… more than half	28.6%	31.4%	35.2%	38.0%	36.7%	
… all of it	57.1%	40.1%	46.6%	39.0%	39.1%	

Who do you usually travel with?						
… Alone	17.0%	10.1%	14.0%	18.3%	17.2%	
… With partner	39.0%	50.7%	43.2%	45.5%	44.4%	.140
… With partner and children	25.3%	20.3%	28.0%	17.8%	21.3%	
… With Friends	18.1%	15.9%	13.1%	16.9%	16.6%	
… With an organized group	0.5%	2.9%	0.6%	1.7%	1.4%	

Chapter 4: Essay 2 - Tourists' Advice on How to Prevent Them from Canceling

Hajibaba, H., & Dolnicar, S. (under review). Tourists' advice on how to prevent them from canceling. (Research Note)

Contributor	Overall contribution
Homa Hajibaba	82%
Sara Dolnicar	18%

Abstract

Natural disasters and terrorism that hit tourist destinations can negatively affect tourism demand. The drop in tourism demand following crises is specifically critical to tourism dependent economies. To reduce the negative effect of such events, preventative measures have to be implemented by tourist destinations. Using open-ended questions, the present study directly asks tourists what measures would prevent them from canceling in the event of an earthquake or a terrorist attack hitting their planned destination. From the wide range of reported preventative measures, several broad themes emerged, the two most frequent of which are: guarantee of safety and provision of up-to-date safety information.

Introduction

Tourism is an industry critically supporting many economies. Crises occurring unexpectedly at tourist destinations have the potential of causing dramatic drops in tourism demand, thus harming the local tourism industry and reducing its contribution to the country's economy. Recent examples include the 2011 Christchurch earthquake (Christchurch & Canterbury Tourism, 2012) and the 2013 political tension in Egypt (UNWTO, 2014).

It is critical, therefore, for tourism authorities to protect the tourism industry if an unexpected crisis hits a destination (Faulkner, 2001; Beirman, 2003). Most recently, Hajibaba, Gretzel, Leisch and Dolnicar (2015) identified crisis-resistant tourists as an attractive target segment in crisis situations. Strategies such as provision of guarantees and information are found to reduce consumers' perceptions of risk following a crisis (Mitchell & Boustani, 1994). Several protection measures have also been proposed in the tourism literature: information updates, guarantees of personal safety, surveillance systems, free insurance coverage and marketing incentives such as price reductions (Mansfeld, 1999; Pizam, 1999; Beirman, 2003; Law, 2006; Kozak, Crotts & Law, 2007; Ritchie, 2009). It is not known, however, whether these measures are helpful in minimizing the impact crises can have. Developing such knowledge is difficult because any of the above measures used by destinations in the past were applied in different ways and circumstances, making the derivation of systematic and generalizable knowledge impossible.

The present study aims to gain insight into promising measures by asking tourists directly what could be done to prevent them from canceling. As opposed to studying the effect of individual measures in the context of a specific crisis event, this

approach reveals a broad range of actions destinations can take in an attempt to reduce cancelations in times of crises. As such the study responds to the call for more research into the attitudes of (potential) visitors of crisis-affected destinations by Mair, Ritchie and Walters (2016).

Methodology

Data was collected from 1196 adult Australian residents who took at least one vacation in the last year. They were asked to think of a trip similar to their last holiday. Then they were given two disaster scenarios (earthquake and terrorist attack) and asked the following open-ended question: "Is there anything that could be done to prevent you from canceling?" This question was asked deliberately in a way that minimizes biases. Respondents were assured they would get 95% of their expenses refunded if they chose to cancel. Earthquake and terrorist attack have been frequently identified as two critical events which affect travelers' decision making and tourist arrivals (Huang & Min, 2002; Law, 2006; Hall, 2010). Thus, earthquake and terrorism are used as disaster scenarios in the current study. Data was collected by an online research panel company; respondents received a small compensation payment.

Results

Terrorism scenario

The terrorism scenario read as follows: "*Now please imagine that – shortly before the start of your trip – you hear in the news that there was a terrorist attack at the destination you are planning to travel to. A bomb detonated in the center of town.*

Ten people were killed and more than 20 injured. The people responsible for the terrorist attack were shot at the scene and a major cleaning up effort is on the way."

Nearly three quarters of respondents (74%) indicated they would cancel their trip under these circumstances. Of those, only seven percent said something could be done to prevent them from canceling. They were invited to list promising measures. Fifty-two respondents provided written measures.

The most frequently raised concern relates to safety and security where respondents differentiated between one-off incidents and incidents which would have further consequences ("*I would go ahead with my trip if there is reasonable expectation that the others behind it [the terrorist attack] are not planning another attack in the same place.")* and indicated that two measures were critical to overcome this concern: a guarantee of safety and up-to-date safety information.

The most frequently mentioned measure was a guarantee of safety by officials ("*I would go ahead based on Foreign Affairs Advisory that the area is safe for Australians planning to travel there.").* Interestingly, some respondents wanted a guarantee by the local government at the destination, others wanted an assurance of safety by their own government using websites such as www.smartraveller.gov.au. Within that same category other options included an assurance of safety from people at the destination and increased local security such as increasing the number of police or guards on the streets ("*Patrol the area and I will go.").* Availability of up-to-date reliable information on the local developments from formal (governments) and informal sources (friends and families) was also frequently mentioned.

Changing either the date of the trip, the location of the trip or at least the accommodation was mentioned as an approach to avoiding cancelation (*"I would not*

cancel if I had an option to delay my trip so that the clean-up was completed and any potential future attacks were unlikely."). Some respondents felt that the dire situation in which the destination finds itself may present an opportunity for them to benefit. Examples include accommodation and flight upgrades. These are not measures which relate to the unexpected crisis occurring, nor does it increase their safety, rather these tourists want to be "bribed" into not canceling.

Finally, the aspect of familiarity with the destination emerged. Familiarity with the destination as well as visiting and helping friends and family at the destination reduce the inclination of people to cancel their planned vacations (*"If it was a familiar place with family and support I would still potentially go.").*

Earthquake scenario

The earthquake scenario read as follows: "*Now please imagine that – shortly before the start of your trip – you hear in the news about a major earthquake at the destination you are planning to travel to. The earthquake has caused some serious damage to buildings, but your accommodation is OK. It cannot be excluded, however, that there may be aftershocks."*

Seventy two percent of respondents indicated that they would cancel the trip. Nine percent (78 respondents) of those who indicated they would cancel listed measures that might prevent their cancelation.

As was the case for the terrorism scenario, safety and assurance of safety was mentioned frequently; by about one third of respondents. They pointed to the fact that there are reliable sources other than governments that can provide such assurances in the earthquake scenario ("*I would not cancel if I received a guarantee from a geological society that there are no aftershocks.")*. Some respondents wanted

guarantee of support and cover in the event of further disasters. Also – as in the case of the terrorism scenario – many respondents mentioned the importance of up-to-date information on safety status and the potential of special offers, price drops, flight upgrades, changes of accommodation as well as change of location and date of trip.

As opposed to facing the situation of a terrorist attack, the concern that they may be limited in their planned activities due to earthquake damage was raised more frequently (*"I would go if the sights and buildings I am going to see are not damaged.").* Also more frequently mentioned were changes of travel plans as well as the wish to assist locals, especially friends and family (*"I would go if I felt I could be of use to help my friends who live in that area or other villagers.").*

Conclusions

This study has revealed possible measures destinations can take to proactively counteract tourist cancelations. Figure 1 provides a summary of findings. Although this is a qualitative study which did not aim to determine the proportion of tourists who view each of the measures mentioned as promising in terms of their potential to prevent trip cancelations, it is still interesting to note the relative proportions. Guarantees of safety and the availability of safety information are critical measures especially in the terrorism scenario (see Figure 1), providing support for previous studies that find safety as an important factor for travelers when choosing a destination (e.g. Chen & Gursoy, 2001). Previous research also points to the importance of guaranteeing personal safety to tourists (Ryan, 1993; Sönmez, 1998). The availability of safety information is emphasized as a measure that enhances travelers' confidence to travel when facing a risky situation (Beirman, 2003; Ritchie,

2009). Both guarantees and information search are identified as strategies consumers use to reduce risk (Mitchell & Vassos, 1998; Moutinho, 1987; Roselius, 1971).

Some tourists reduce risks through changes in travel plans (Hajibaba et al., 2015). Results from the present study show that if the concern is not limited to immediate tourist numbers at the destination, facilitating the postponement of the trip can be effective in securing medium-term business opportunities.

Another interesting finding is what could be referred to as the "inoculation effect" of the visiting friends and relatives market segment. Destination familiarity and having family and friends at the destination had a very positive effect on tourists sticking to their original travel plans. Familiarity with the destination has previously been identified as a risk reduction factor (Tideswell & Faulkner, 1999; Walters, Mair & Ritchie, 2015). Similarly, tourists with the travel purpose of visiting friends and relatives perceive lower risks (Ritchie, Chien & Sharifpour, 2016). Destinations could launch promotion action targeted specifically at this segment, for example: "*There has never been a better time to visit family and friends – everything is half price!*"

Finally, it appears that there is space for genuinely altruistic appeals. Participants in the present study displayed concern about the wellbeing of locals and their willingness to contribute to the recovery of the destination (Walters, Mair & Ritchie, 2015). Such altruism, however, should not be left to chance, rather it should be proactively encouraged ("*You help us – we help you make your vacation even more attractive!*").

While this study identified a number of possible measures destinations can take when affected by an unexpected crisis, it is limited by focusing on two kinds of crises only.

Also, while open-ended questions reduce bias, they do not permit conclusions about the proportion of tourists reactive to each of the measures. A follow-up quantitative study would be of value as would a follow-up experimental study to learn about comparative preferences of tourists.

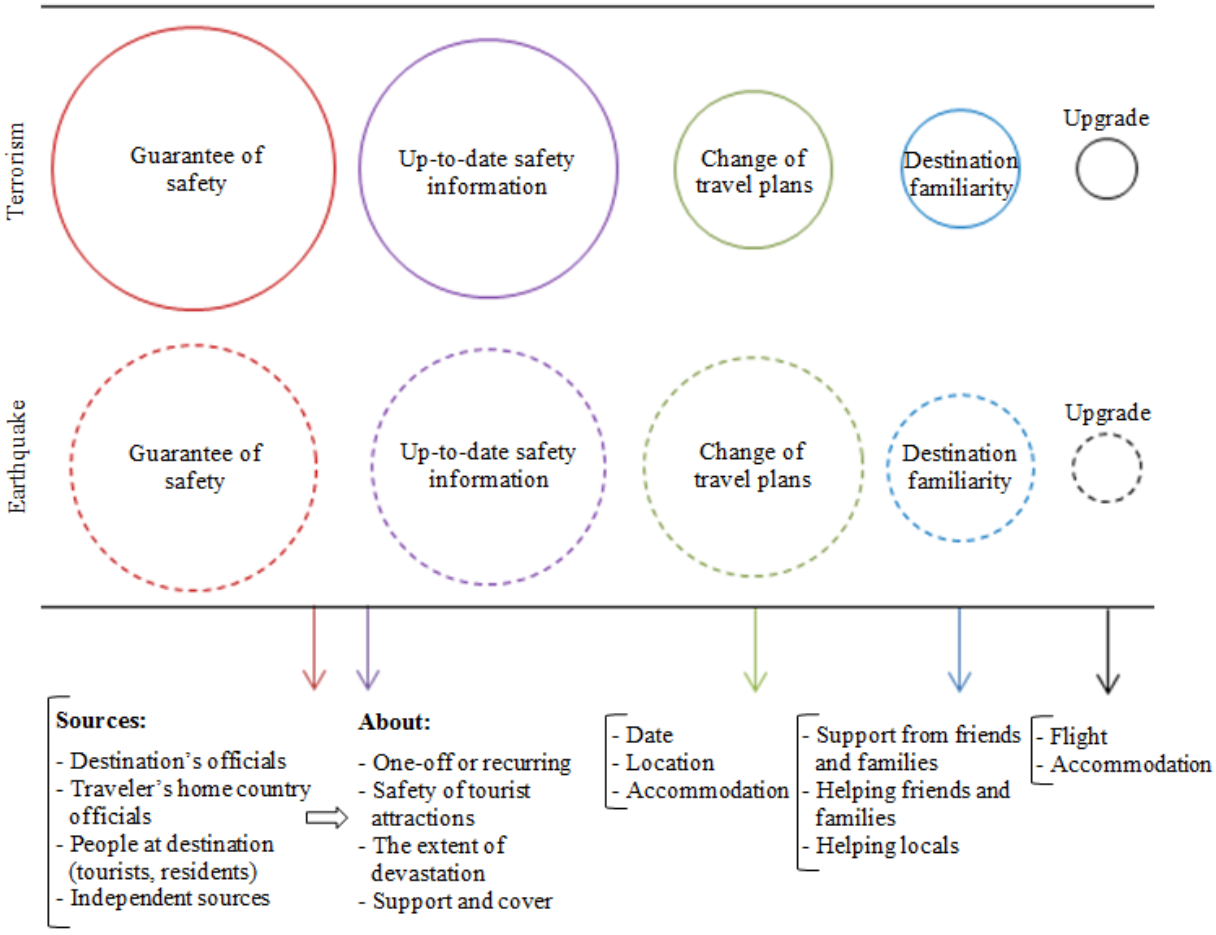

Figure 1. Preventative measures of trip cancelations (size of circles indicates relative proportions)

Acknowledgments

We thank the Australian Research Council for support under grants DP120103352 (project cost) and DP110101347 (salary cost). We thank Tim Coltman and Logi Karlsson who provided feedback on previous versions of the manuscript.

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Chapter 5: Essay 3 - Preventing Tourists from Canceling in Times of Crises

Hajibaba, H., Boztuğ, Y., & Dolnicar, S. (2016). Preventing tourists from canceling in times of crises. *Annals of Tourism Research*, 60, 48-62.

Contributor	**Overall contribution**
Homa Hajibaba	67%
Yasemin Boztuğ	25%
Sara Dolnicar	8%

Annals of Tourism Research 60 (2016) 48–62

Contents lists available at ScienceDirect

Annals of Tourism Research

journal homepage: www.elsevier.com/locate/atoures

Preventing tourists from canceling in times of crises

Homa Hajibaba [a,*], Yasemin Boztuğ [b], Sara Dolnicar [c]

[a] University of Wollongong, Australia
[b] Georg-August-University Goettingen, Germany
[c] The University of Queensland, Australia

ARTICLE INFO

Article history:
Received 15 July 2015
Revised 24 June 2016
Accepted 26 June 2016

Coordinating Editor: M. Uysal

Keywords:
Travel cancelations
Crisis management
Conjoint analysis

ABSTRACT

Tourism destinations experiencing a crisis are vulnerable to trip cancelations and sudden drops in demand. Little is known about trip cancelations and how to prevent them. Specifically, it is unclear whether the effectiveness of different prevention approaches varies across crises and tourists segments. Using a conjoint design, the present study investigates the comparative stated effectiveness of different prevention approaches in situations where different crises hit a destination. Results indicate that certain prevention actions indeed have the potential to reduce cancelations. The most effective approach is change of accommodation—especially so when combined with an upgrade—followed by information updates and finally the provision of security devices or security staff. The effectiveness of approaches varies across tourists and crises.

Article available online at:

http://www.sciencedirect.com/science/article/pii/S0160738316300858

Abstract

Tourism destinations experiencing a crisis are vulnerable to trip cancelations and sudden drops in demand. Little is known about trip cancelations and how to prevent them. Specifically, it is unclear whether the effectiveness of different prevention approaches varies across crises and tourists segments. Using a conjoint design, the present study investigates the comparative stated effectiveness of different prevention approaches in situations where different crises hit a destination. Results indicate that certain prevention actions indeed have the potential to reduce cancelations. The most effective approach is change of accommodation – especially so when combined with an upgrade – followed by information updates and finally the provision of security devices or security staff. The effectiveness of approaches varies across tourists and crises.

Introduction

Extreme event circumstances can have devastating effects on regions heavily reliant on tourism. For example, tourism is Indonesia's primary economic growth engine and the second largest foreign exchange earner after oil and gas (The World Bank, 2004). On 12 October 2002, the Bali bombings caused the single largest drop in international tourism demand in the history of this island (Darma Putra & Hitchcock, 2006). The number of tourist arrivals in the six months following the Bali bombings declined to less than half (43%) of the number of arrivals in the six months prior to the bombing (Pambudi, McCaughey & Smyth, 2009). By 21 October, 40% of the Australian bookings with the national carrier Garuda were canceled and 2,000 tourists shortened their holiday (Henderson, 2003). Hotel occupancy dropped sharply and many tourism-related jobs were cut (Hitchcock & Darma Putra, 2005). The World Bank (2004) estimates that one-third of workers were affected by job losses and up to three-quarters of hotel workers were either working on reduced shifts or were temporarily redundant.

The August 2015 terrorist attack in Tunisia led to the evacuation of tourists by major holiday agencies as well as cancelation of all bookings in the ten days following the attack (Burrows & Hutchinson, 2015; Calder, 2015). Cancelations of bookings made for the entire summer season were facilitated free of charge (Calder, 2015). The tourism industry is an important economic driver in Tunisia, contributing more than 15% to the country's GDP and supporting 14% of total employment (The World Travel & Tourism Council, 2015).

According to Sönmez (1998), terrorism and political instability are strongly linked and both have devastating effects on tourism. Terrorism takes place quickly and is immediately and intensely covered by media. Political instability has long-term effects representing "an enduring barrier to international tourism" (Sönmez, 1998, p.421). For example, the Middle East is considered risky due to ongoing conflicts in the region (Mansfeld, 1996; Sharifpour, Walters & Ritchie, 2014). International tourist arrivals to this region have been adversely affected (Hall & O'Sullivan, 1996; Mansfeld, 1996). The average annual growth of international tourist arrivals (2005-2013) in the Middle East (4.5%) is less than that of other emerging regions including the Asia Pacific (6.2%) and Africa (6.1%) (UNWTO, 2014).

The 2011 Christchurch earthquake – the second deadliest natural disaster to hit New Zealand – has also adversely affected the local tourism industry. Annual international tourist demand in Canterbury dropped by 73% (Christchurch & Canterbury Tourism, 2012; Orchiston, Prayag & Brown, 2016). Tourism is the third largest economic sector in the Canterbury region (Christchurch & Canterbury Tourism, 2012) and the loss of income due to cancelations and fee refunds forced many businesses to seek government assistance (Becken, 2013).

According to Hall (2010), financial and political crises have had the strongest effects on international tourist arrivals between 1970 and 2010. Natural disasters have also been consistently identified by researchers as a risk factor affecting travelers' decisions (Law, 2006). The present study focuses on political instability, natural disasters and terrorism and asks how these crises affect travelers' decision making. Little is known about why tourists cancel bookings and even less how this can be

prevented. The present study contributes to filling this knowledge gap. Specifically, the following research questions are investigated:

1) Can cancelations due to crises at the destination be prevented?

2) Does the effectiveness of prevention approaches depend on the nature of the crisis?

3) Does the effectiveness of approaches vary across tourists?

Findings contribute to filling a critical knowledge gap in tourist decision making. They also enable destination managers and marketers to manage a crisis event more effectively and target appropriate groups of people with specific strategies to prevent them from canceling.

Literature review

The tourism literature identifies a number of risks associated with tourism including terrorism, natural disasters, political instability, health, crime, financial, and social risks (Roehl & Fesenmaier, 1992; Maser & Weiermair, 1998; Sönmez & Graefe, 1998a, 1998b; Faulkner, 2001). Tourists choose to travel to low risk destinations or destinations perceived to be less risky (Sönmez & Graefe, 1998b; Law, 2006). Tourists perceive travel risks differently (Floyd & Pennington-Gray, 2004). Asian tourists, for example, perceive risks and their magnitude of threat higher than Western tourists (Law, 2006). Risk perceptions affect travel decision making (Roehl & Fesenmaier, 1992; Sönmez & Graefe, 1998b; Sönmez, Apostolopoulos & Tarlow, 1999). The occurrence of extreme events followed by media sensationalization negatively impact perceptions of safety and security of destinations (Sönmez & Graefe, 1998b) leading to different reactions: some tourists do not alter their travel

plans, some change them, some delay them and some cancel (Hajibaba, Gretzel, Leisch & Dolnicar, 2015).

In a study by Valencia and Crouch (2008), the majority of respondents indicated that they would cancel or postpone the trip to their planned destination if a bombing had occurred (45% would cancel/19% would postpone) or a hurricane had hit (49%/36%). Law (2006) finds that most tourists – especially Asian tourists – are likely to change their travel plans when faced with a risky situation at destination. Hajibaba and Dolnicar (2015) conclude that the majority of respondents would cancel their trip when faced with a terrorist attack or an earthquake.

Tourists are either risk-neutral, risk avoiders or risk takers (Moutinho, 1987). Tourist's risk taking is an important predictor of cancelation behavior in a crisis situation (Hajibaba & Dolnicar, 2015). Hajibaba, Gretzel, Leisch and Dolnicar (2015) identify risk propensity as an explanation for tourists' crisis-resistance behavior. According to Kozak, Crotts and Law (2007) people from risk-tolerant cultures are less likely to change travel plans.

While there is some understanding on how tourists (intend to) react when an unexpected crisis hits at the destination of their choice, little is known about how to prevent cancelations. A few theories and studies can be used to identify potential approaches. For example, Thaler (1980) finds that prior monetary investments make consumers more willing to engage in an activity, even if risky. Park and Jang (2014) find cancelation charges to have a negative effect on tourists' intentions to cancel a trip. These findings suggest that pricing or the timing of payments being made could be modified preventatively in order to reduce the risk of cancelations.

Previous research emphasizes the importance of post-crisis communication and the effect it has on consumers' perceptions and ultimately the organizational reputation (Coombs, 2007). Coombs and Holladay (2008) argue that organizations have to communicate instructing information (how to protect oneself from crisis) as well as adjusting information (help to cope psychologically with the crisis) with customers after a crisis. The lack of information in a product-harm crisis may lead consumers to stop using a product (Siomkos & Kurzbard, 1994).

According to Roselius (1971), buyers – when faced with a risky situation – can engage in different risk reduction strategies: (1) reducing risk by decreasing the probability that purchase will fail or by reducing the severity of real or imagined loss suffered if the purchase does fail, (2) shift from one type of perceived loss to one for which they have more tolerance, (3) postpone the purchase, or (4) make the purchase and absorb the unresolved risk. Devices or actions can be initiated – either by the buyer or by the seller – in order to conduct the first two risk reduction strategies (Roselius, 1971). For example, information (search) is a way of reducing the probability that a purchase will fail. Businesses (especially those facing a crisis) can engage in different risk reduction strategies such as special offers, guaranties and informative advertising which will affect consumers' perceptions of the quality of the product (Mitchell & Boustani, 1994; Byzalov & Shachar, 2004; Zhao, Zhao & Helsen, 2011).

Mitchell (1993) argues that post-purchase risk reduction strategies are closely related to Festinger's (1957) cognitive dissonance theory and mostly attempt to reduce psychological or financial loss. This occurs when the consumer has second thoughts or doubts after the purchase decision has been made. Tourists faced with a crisis at

the destination of their choice may be experiencing such post-purchase dissonance. Those tourists who cancel experience sufficient post-purchase dissonance to do so (Donnely Jr & Ivancevich, 1970). Cognitive dissonance theory thus leads to the possibility of reducing cancelations by attempting to help tourists with the reduction of their personal feelings of cognitive dissonance. This could be achieved, for example, by providing additional – more consonant – information from formal and informal sources (Mitchell & Boustani, 1994).

Possible actions to prevent cancelations mentioned specifically in the tourism literature include the restoration of confidence in the destination through the provision of up to date information on the developments (Mansfeld, 1999; Beirman, 2003; Ritchie, 2009). Media play a key role both as a primary information source as well as the potential creator of crises where initially there is only a minor incident (Quarantelli, 1996; Faulkner, 2001). Crises have a higher probability of being reported than recovery and restoration (Beirman, 2003). Media supervision and good media relations thus represent a key avenue of preventing cancelations. In addition to media, travel agents communicate updates to tourists, thus affecting their decision to cancel or not to cancel a trip. Fuchs and Reichel (2011) find gathering information from travel agents as a risk reduction strategy particularly used by first-time visitors. Direct communication with travel agents thus represents another possible action to counteract cancelations (Ritchie, 2009).

Providing marketing incentives such as discounts and value-added extras may also prevent cancelations (Pizam, 1999; Beirman, 2003) as may the guarantee of personal safety and security and the introduction of protection solutions by local government (Law, 2006; Kozak, Crotts & Law, 2007). Travel insurance (Mitchell & Vassos,

1998) and familiarity with the destination (Tideswell & Faulkner, 1999) act risk relieving in holiday purchases. According to Law (2006) tourists are neutral towards free insurance and the guarantee of personal safety while transparency of information and introduction of surveillance systems or protection solutions are considered important, especially by Asian tourists. Kozak, Crotts and Law (2007) test the relative stated impact of three actions to enhance the confidence to travel to different geographical regions after a crisis. They find free insurance as mostly expected by tourists with the intention of traveling to Australia and New Zealand, guarantee of personal safety and security as mostly expected to travel to North America, and transparency of information as mostly expected to travel to Asia.

Some of the actions discussed above have been implemented by destinations facing unexpected crises. For example, Christchurch & Canterbury Tourism immediately helped travel retailers and consumers to reorganize planned vacations by changing accommodation to nearby locations such as Ashburton, Methven and Kaikoura (Christchurch & Canterbury Tourism, 2012). In addition, international media were informed about the functionality of most parts of Christchurch and – in collaboration with other regional tourism organizations – a marketing campaign was launched to promote tourism on the South Island (Christchurch & Canterbury Tourism, 2012).

Yet, to date, there is little knowledge about the potential of the above actions to prevent cancelations. Specifically, it is not clear which prevention action is the most effective when a certain kind of crisis hits a tourist destination. For example, little advice can be given to managers in Tunisia on whether cancelations can best be prevented by providing up to date information, by offering tourists security services, by moving them into accommodations far away from the attack scene, or by

upgrading them thus offering them more value for money if they choose not to cancel.

The above prevention approaches have been developed based on how tourists react to an unexpected crisis at their destination. Thus, we hypothesize that such prevention actions have the potential to prevent cancelations. The nature of the crisis emerged as influencing travelers' reaction to extreme events (Hajibaba & Dolnicar, 2015). Therefore, we postulate that the effectiveness of prevention approaches varies across kinds of crises.

Roehl and Fesenmaier (1992) show that some tourists pay more attention to some risk dimensions than others. In the same crisis situation, some tourists may pay attention to physical risks while other tourists may focus on financial risks. As a consequence, tourists react differently to different risk reduction strategies. Tourists concerned with not getting value for money spent react to financial risk reduction strategies such as sales promotions (Mitchell & Greatorex, 1993). Tourists focusing on physical risks react to strategies that reduce physical risks such as provision of safety solutions. A number of studies (Carr, 2001; Lepp & Gibson, 2003; Roehl & Fesenmaier, 1992) show that tourist-related and travel-related factors such as personality and travel party affect risk perceptions and can be assumed to affect reactions to risk-reduction strategies. Therefore, we hypothesize that the effectiveness of prevention approaches varies across tourists.

Roselius (1971) postulates that a mix of actions should be taken in dependence of the kind of loss and the kind of customer. The present study, therefore, investigates tourists' relative preference for different prevention approaches in different crisis situations. This approach allows a comparison of different prevention approaches

across all crisis situations and kinds of tourists. Findings, thus, lead not only to a better understanding of tourists' cancelation decisions and ways to prevent them, but are also of immediate value to destination managers in desperate need of viable recommendation to prevent irrecoverable losses in revenue in the aftermath of a crisis.

Methodology

Data was collected by a professional online research panel company from 887 Australian residents who had undertaken a holiday within the past twelve months. No other restrictions or sampling quotas were imposed. Sample representativeness is fulfilled because online fieldwork companies recruit members using a wide range of recruitment avenues and keep their panel representative of the national population (Dolnicar et al., 2008). Holidays were defined as trips with at least four overnight stays away from home for non-business reasons such as for leisure and recreation or visiting friends and family. Respondents were asked questions about their last holiday, including their travel motivations, who they traveled with and which accommodation they stayed in.

Respondents were asked to imagine the situation where they have booked a trip similar to their last holiday but an unexpected crisis hit their destination. A conjoint design was then used: they were presented with nine possible alternatives (sets of actions) by destination managers. Four sample alternatives are provided in Fig. 1. Respondents were asked to rank these nine alternatives in multiple stages. In the first stage, respondents had to choose – among all nine alternatives – only the alternative with the highest and lowest likelihood of preventing them from canceling. The

alternatives selected in the first stage were not presented in the second stage. In subsequent stages they chose the highest and lowest among the remaining options (see the appendix). From these responses a full ranking of the nine alternatives was derived.

Possible combinations of actions taken by destination management
- Regular updates through your travel agent. - Upgrade to luxury accommodation far from the attack scene. - Provision of personal (or group) security guard so you can move around freely at the destination.
- Regular updates through your travel agent. - Change of accommodation far from the attack scene. - Provision of personal safety device that allows you to signal an emergency to call for help.
- Information about developments at the destination through the media. - Change of accommodation far from the attack scene. - Provision of personal (or group) security guard so you can move around freely at the destination.
- Information about developments at the destination through the media. - Upgrade to luxury accommodation far from the attack scene. - No personal safety solutions at the destination.

Figure 1. Sample alternatives (sets of preventative actions)

Thereafter, respondents were presented with their ranking and asked whether – in each of those nine alternatives – they would cancel or not cancel their trip. In order to make responses independent of cancelation fees, respondents were assured they would get 95% of all their expenses refunded if they would need to cancel their trip for whatever reason. Note that a very straightforward operationalization of cancelation is used: the abandoning of travel plans. Each respondent was randomly assigned to only one of the crises (terrorism, earthquake, or political instability). Two

hundred ninety six respondents were presented with the terrorism crisis, 296 with the earthquake crisis, and 295 with the political instability crisis.

Respondents also provided demographic information and completed a personality item battery. Personality is measured using the 10-item version of the Big Five Inventory developed by Rammstedt and John (2007). In this short personality instrument, each of the 'big five factors' of extraversion, agreeableness, conscientiousness, neuroticism and openness to experience are measured using two items. Each of the items is measured on a five-point scale from −2 = 'disagree strongly' to +2 = 'agree strongly'. After adding up relevant items, each personality dimension score ranges from −4 to +4. Risk taking was measured for recreation, health, career, finance, safety and social risk on a five-point scale from 'never' (0) to 'very often' (4) using the scale developed by Nicholson et al. (2005). Respondents were also asked to indicate which TV channels they regularly watch, which radio stations they regularly listen to, and which newspapers they regularly read. These media questions are critical to be able to reach target segments of tourists. The complete questionnaire is provided in the appendix.

Data was analyzed using conjoint analysis (Green & Rao, 1971; Green & Srinivasan, 1978, 1990; Gustafson, Herrmann & Huber, 2003; Rao, 2014). The assumption of conjoint analysis is that individuals' preferences or utility functions can be derived from observations of their choices in hypothetical situations (Kemperman, Borgers, Oppewal & Timmermans, 2000). Conjoint analysis allows inclusion and combination of large numbers of attributes to describe a hypothetical situation in which respondents evaluate the situation as a whole rather than evaluating attributes individually, making preference statements more realistic. In addition, conjoint

analysis allows the presentation of different alternatives, some of which may not currently exist but turn out to be the best options (Haider & Ewing, 1990).

Conjoint analysis was performed separately for each crisis situation on the basis of three approaches (attributes) that can be used by destination management to prevent cancelations: (1) accommodation change, (2) the provision of information about the developments of the crisis at the destination, and (3) the provision of security and safety solutions. For each one of those three approaches (attributes), three specific actions (levels) are tested. The three accommodation actions include: (1a) an upgrade to luxury accommodation far from the exact location of where the crisis occurred, (1b) a change of the accommodation to a location far away from where the crisis occurred, and (1c) no change of accommodation. Information provision actions are: (2a) regular updates by travel agent, (2b) information about developments at the destination through the media, and (2c) no updates. The three safety and security actions are: (3a) provision of a personal (or group) security guard to enable tourists to move freely at the destination, (3b) the provision of personal safety devices that allow tourists to signal an emergency to call for help, and (3c) no personal safety action.

A full-factorial design of three approaches (attributes) with three actions (levels) results in $3^3 = 27$ combinations (alternatives). To make the task more viable for respondents, a subset of size nine combinations (alternatives) was selected using the Latin square design (Grant, 1948; McNemar, 1951). This design assumes that the attributes have no interactions. This assumption aligns well with the context of this study: we do not expect that accommodation type, information type and safety

interact strongly as these attributes reflect distinct types of changes in the vacation booked.

The part-worth model in conjoint method estimates three functions of U1(X1), U2(X2) and U3(X3) respectively for the three attributes of X1 (accommodation), X2 (information) and X3 (safety) in such a way that the sum of various realizations of U1, U2 and U3 best represents the judged evaluations for the nine alternatives (Rao, 2014):

$$Y_i = U_1(x_{i1}) + U_2(x_{i2}) + U_3(x_{i3}) + \text{error}, \; i = 1, 2, \ldots, 9$$

where:

x_{i1} = level of the accommodation attribute for the ith alternative,

x_{i2} = level of the information attribute for the ith alternative,

x_{i3} = level of the safety attribute for the ith alternative,

Y_i = preference given to the ith alternative,

$U_1(\bullet)$ = part-worth function for accommodation attribute,

$U_2(\bullet)$ = part-worth function for information attribute, and

$U_3(\bullet)$ = part-worth function for safety attribute.

The estimated functions can also be used to predict the utility score for new alternatives not used in the data collection. The dependent variable in the conjoint model represents tourists' trade-offs among the attributes of an alternative. Specifically, the dependent variable in the model (Y) is the respondents' evaluation

(stated preference ranking) of each hypothetical alternative set of actions that can be used by destination management.

A standard conjoint approach was used due to the following reasons: (1) it best reflects the rationale behind the modelling approach as the aim was to find out the threshold value (alternative) which is the minimum to prevent tourists from canceling. In addition, traditional conjoint analysis (2) allows estimating individual utility and importance values directly, measures which were required for further segmentation analysis; (3) requires fewer decisions by respondents than choice based conjoint modelling and (4) participants are not forced to select the one and only alternative, rather it allows for the existence of a minimum offer that prevents tourists from canceling their trip (even though it is not the maximum which could be offered).

Results

Respondents all resided in Australia, a mature tourist market. The sample consists of 439 females and 448 males. Ten percent of respondents are aged between 18 and 24. The percentage of respondents in other age groups of 25-34 (21%), 35-44 (18%), 45-54 (18%), 65 and over (17%), and 55-64 (16%) is about the same. About half of the respondents have university education; 42% work full-time, 20% are retired, 18% work part-time or casually, 7% are homemaker and 6% are student; 75% live in metropolitan areas.

Can cancelations be prevented?

Respondents were asked to rank nine sets of preventative actions that can be taken by destinations to avoid cancelations. This was done in multiple stages because ranking

nine sets would be too complex a task. After the ranking of the nine sets of preventative actions was derived for each respondent, they were asked whether or not they would cancel their trip if the destination would take each of those nine sets of actions.

Some respondents indicated that none of these sets of actions would prevent them from canceling; they would cancel in any case. The cancelation frequency for these respondents is nine. At the other extreme, some respondents will never cancel. Their frequency of cancelation is zero. All the other respondents indicate that some sets of actions would prevent them from canceling, but others would not. The frequency of cancelation for these respondents ranges from one to eight.

Figure 2 shows how many respondents have which cancelation frequency. The vertical axis represents the number of respondents. The horizontal axis represents the frequency of cancelations which ranges from zero (not canceling ever) to nine (canceling no matter which sets of actions are taken by the destination).

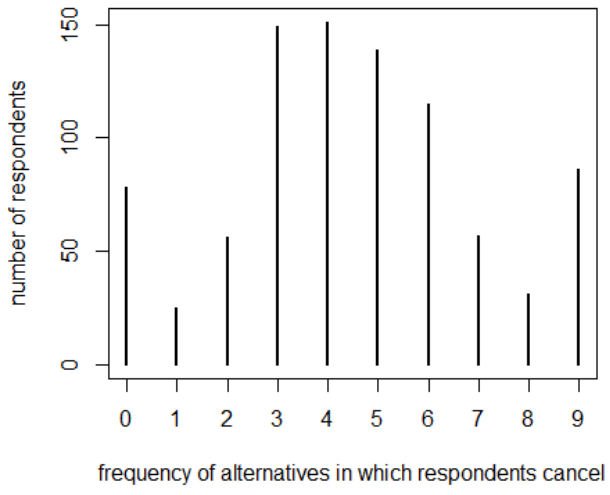

Figure 2. Stated cancelation frequency

As can be seen, most respondents react to actions taken by the destination. Only 10% of respondents would cancel no matter what sets of actions destination management would take. Ninety per cent of respondents indicated that at least one of the ways offered to them in the questionnaire would prevent them from canceling, suggesting that most tourists are open to suggestions relating to how they may be able to go ahead with their planned vacation.

Does the effectiveness of approaches depend on the nature of the crisis?

Conjoint models for each crisis situation are analyzed. Table 1 provides the conjoint analysis results for the three kinds of crises: terrorism, political instability and an earthquake. The importance values column shows the relative importance of each approach. Relative importance values are derived by dividing the utility range for each approach by the sum of the utility ranges for all approaches. The importance values are interpreted based on the assumption that they are relative to the other attributes used in the study. Nevertheless, the levels of all attributes were designed using a similar rationale: no change – medium change – large change. Therefore we are able to interpret them in a more or less general manner. The importance values presented in Table 1 indicate the importance of each approach for respondents at the aggregate level. However, a standard conjoint analysis also enables estimation of utilities, and therefore importance values, at the individual level. The effectiveness of prevention approaches at the individual level is discussed in the next section.

Table 1. Conjoint analysis output

Kind of crisis	Prevention approaches (attributes)	Prevention actions (levels)	Utility estimate	Standard error	Importance values (%)
Terrorism	Accommodation	Nothing	–1.21	.099	37.57
		Away from crisis	.347	.099	
		Luxury away from crisis	.861	.099	
	Information on development	Nothing	–.939	.099	32.21
		Media	.389	.099	
		Travel agent	.551	.099	
	Safety solutions	Nothing	–.806	.099	30.22
		Personal safety device	.256	.099	
		Personal security guard	.551	.099	
	Constant		5.00	.070	
Earthquake	Accommodation	Nothing	–1.25	.106	38.43
		Away from crisis	.472	.106	
		Luxury away from crisis	.775	.106	
	Information on development	Nothing	–.979	.106	33.38
		Media	.359	.106	
		Travel agent	.619	.106	
	Safety solutions	Nothing	–.776	.106	28.19
		Personal safety device	.338	.106	
		Personal security guard	.438	.106	
	Constant		5.00	.075	
Political instability	Accommodation	Nothing	–1.25	.071	36.48
		Away from crisis	.391	.071	
		Luxury away from crisis	.863	.071	
	Information on development	Nothing	–1.03	.071	31.24
		Media	.421	.071	
		Travel agent	.606	.071	
	Safety solutions	Nothing	–.973	.071	32.28
		Personal safety device	.349	.071	
		Personal security guard	.624	.071	
	Constant		5.00	.050	

As can be seen from Table 1, the accommodation approach has the highest relative importance value which means that – on average – it has the strongest effect on people's stated cancelation decisions across all crises. For two of the three crises (terrorism and earthquake) the availability of up to date information on the crisis emerges as the second most important approach. In the case of political instability at the destination, the availability of safety solutions is the second most important.

An aggregate analysis of importance of approaches across all three crises leads to the conclusion that accommodation is most important, followed by information provision and provision of safety solutions. Further, the results indicate that information importance (p-value = 0.04) and safety importance (p-value = 0.00) significantly vary across crisis types. Up to date information is more important in case of an earthquake compared to the other two kinds of crises, as is safety solutions in case of political instability.

Table 1 also includes the utility (part-worth) scores for each action. Higher utility values indicate higher preference. In terms of accommodation changes, the upgrade to luxury accommodation far from the crisis center is preferred, followed by a change of accommodation far from the crisis center. In terms of information provision, respondents prefer news updates by their travel agents rather than media and – with respect to safety and security actions – personal security guards are preferred to personal safety devices which allow an emergency call to be sent only.

The total utility of different alternatives (sets of actions) can also be computed for different kinds of crises. For example, the total utility of the first alternative presented to the respondents (see Fig. 1) in a terrorism crisis is:

utility (luxury accommodation away from crisis) + utility (information through travel agent) + utility (group security guard) + constant = 0.861 + 0.551 + 0.551 + 5.00 = 6.96.

Also – given that the scale of utilities is common across all attributes (approaches) – utilities can be added across each attribute level (action) to predict the total utility of any new alternative – which has not been used in the data collection phase. For example, imagine a destination hit by an earthquake providing two alternatives of A1 and A2 in an attempt to prevent cancelations. Alternative A1 comprises the attribute levels: accommodation away from the crisis and information through media but no safety solutions. Alternative A2 includes the provision of information through travel agents and the provision of a group security guard but no accommodation change. The preferences for the two new alternatives A1 and A2 can be evaluated and compared based on their predicted utility values. The total utility of Alternative A1 in an earthquake crisis is predicted as:

utility (accommodation away from crisis) + utility (information through media) + utility (no safety solutions) + constant = 0.472 + 0.359 + (–0.776) + 5.00 = 5.05.

The total utility of Alternative A2 in an earthquake crisis is equal to:

utility (no accommodation change) + utility (information through travel agent) + utility (group security guard) + constant = (–1.25) + 0.619 + 0.438 + 5.00 = 4.81.

The total utility of Alternative A1 is higher than that of Alternative A2 which means that alternative A1 is preferred to alternative A2 in an earthquake crisis. However, the preferences for the two alternatives are different in a political instability crisis from an earthquake crisis. Alternative A2 is preferred to Alternative A1 as the utility of Alternative A2 (4.97) is higher than that of Alternative A1 (4.84).

To estimate the validity of conjoint analyses in predicting respondents' preferences, Kendall's Tau statistics are computed as a measure of the goodness of fit of the estimated conjoint models. The results show significance at 1% level for all the three kinds of crises of terrorism (Kendall's Tau=0.889, p-value=.000), earthquake (Kendall's Tau=1.000, p-value=.000) and political instability (Kendall's Tau=0.889, p-value=.000). This indicates that the results from the conjoint analyses are valid and the estimated models explain respondents' preferences well.

Does the effectiveness of approaches vary across tourists?

To make target marketing possible, it is important to know which prevention approach is most effective for which tourists. A commonsense segmentation (Dolnicar, 2004) was performed to see whether people with different preferences for provided approaches differ in any other personal characteristics. A standard conjoint analysis provides utilities and importance values at the individual level. Segmentation was performed based on the importance values of the three approaches of accommodation, information on development, and safety solutions. In other words, tourists were assigned to a segment based on the intervention approach most effective for them.

Three segments of tourists are created accordingly: Accommodation Seekers (N = 409) react most to changes in accommodation. Information Seekers (N = 286) react most to being informed. Safety Seekers (N = 192) care most about safety actions. Differences between segments in metric background variables were tested using Kruskal-Wallis rank-sum test. Differences in categorical background variables were tested using a Chi-square test. All p-values were corrected using Holm's (1979) method.

Segments differ significantly with respect to travel party (p-value = 0.014). Accommodation Seekers more frequently travel with their partner or spouse (44.5%) and less frequently alone (12.5%); Information Seekers travel alone more frequently (20.3%) and Safety Seekers more frequently travel with friends (12.0%) or with an organized group (4.2%). The travel motivation of 'meeting new people' is important to Information Seekers (42%) and Safety Seekers (43%) (p-value = 0.041).

Segments also differ significantly with respect to the personality dimension of conscientiousness. Accommodation Seekers (mean = 1.46) score lower on conscientiousness while Information seekers (mean = 1.80) score higher on conscientiousness (p-value = 0.042). The personality dimension of conscientiousness reflects being careful and organized (Barrick & Mount, 1991). Tourists scoring high on conscientiousness prefer to get up-to-date information in order to be able adjust their travel plans to the situation. The segments do not differ from each other in terms of risk taking.

Safety Seekers (51.6%) watch more ABC1 TV (state TV) compared to other segments (p-value = 0.017). Information Seekers (21.7%) read the Daily Telegraph newspaper (one of Australia's major newspapers) more compared to other segments (p-value = 0.002). Moreover Accommodation Seekers (20.3%) live more frequently in regional areas, Information Seekers (80.1%) live more frequently in metropolitan areas, and Safety Seekers (13.0%) live more frequently in rural areas (p-value = 0.001).

The results therefore indicate that different prevention approaches are effective for different people. Destination managers faced with a crisis can target people based on the prevention approach available to them. For example, if they are in the position of

being able to provide accommodation upgrade, they are better off targeting people traveling with their partner / spouse. Introduction of safety actions is more effective for people traveling with friends or with an organized group i.e. people with weaker ties with each other. Providing updates and information is an effective approach for people traveling alone.

Conclusions, limitations, and future work

The study set out to determine if anything can be done to prevent tourists from cancelations in times of crises hitting tourist destinations, and if so, which approaches are most promising. The results indicate that cancelations can be prevented. However, depending on the kind of crisis, some combinations of preventative actions taken by destination management are more effective than others. An effective combination of actions depending on the nature of crisis can be used to best prevent cancelations.

A conjoint analysis of different approaches indicates that – across all kinds of crises under investigation – offering a change in accommodation (especially when combined with an upgrade) is the most effective approach affecting travelers' stated intentions to cancel a trip, followed by information regarding developments at destination. The effectiveness of different prevention approaches depends on the nature of the crisis.

In case of a terrorist attack – such as the recent shooting in Tunisia – offering tourists a change of accommodation is the most preferred option. The next most preferred approach in a terrorism crisis is the provision of detailed and up to date information on the status at the destination. Offering safety and security solutions is least

preferred by tourists in a terrorism situation. Tourists' ranking of prevention approaches in a terrorism situation is: (1) change of accommodation far from the attack scene, (2) provision of updated information, and (3) provision of safety and security solutions.

In cases where an earthquake hits a tourist destination, moving tourists to accommodations far away from the epicenter is also found to be the most preferred approach. Information emerges as the second most preferred approach in an earthquake situation. In case of an earthquake, updated detailed information – especially relating to affected tourism infrastructure – is vital for tourists to make decision. Provision of safety solutions is the least preferred approach in an earthquake crisis. In addition, safety solutions have a lower importance value in an earthquake situation than when a terrorist attack occurs or the destination is troubled by political instability. The order of preference for the earthquake scenario is the same as for the terrorism attack: (1) change of accommodation, (2) dissemination of updated information, and (3) provision of safety and security solutions. The importance of provision of information varies across disaster scenarios and has the relatively strongest impact when an earthquake hits. Therefore, when faced with an earthquake, a combination of preventative actions should be chosen which focuses strongly on change of accommodation and provision of information.

Tourists' ranking of prevention approaches in a political instability crisis is slightly different from that of a terrorist attack or an earthquake crisis. Once again – in a political instability situation – change of accommodation far from the protests is the preferred approach. However, provision of security and safety solutions (i.e. provision of a personal or group security guard so tourists can move around freely at

the destination or provision of personal safety device that allows tourists to signal an emergency to call for help) outperforms the provision of information in this case. Tourists' ranking of prevention approaches in a political instability crisis is: (1) change of accommodation, (2) provision of safety and security solutions, and (3) provision of up to date information. The importance of provision of safety and security varies across disaster scenarios and has the relatively strongest impact in case of political instability. Therefore, in case of political instability at a tourist destination, a combination of preventative actions should be chosen which focuses strongly on change of accommodation and provision of safety.

Overall, the findings of this study suggest that change of accommodation far from the crisis has the highest average importance and is the most preferred approach across all kinds of crises. Some crises – such as the 2011 Christchurch earthquake – result in a critical destruction to tourist accommodation infrastructure, so change of accommodation becomes inevitable. In some crises – such as the August 2015 Tunisia shooting – tourist accommodation infrastructure is not affected. However, the proximity to the center of crisis can be a source of concern for tourists. In this case, change of accommodation can be offered in form of an upgrade.

The results of this study identify upgrade to a luxury accommodation far from the crisis as the most preferred action among all the actions under investigation and across all kinds of crises. In other words, the utility of the alternative including upgrade to a luxury accommodation far from the crisis, no updated information and no security solutions is higher than that of any other single-action alternative. This suggests not only the importance of the location of the accommodation to tourists, but also the effectiveness of upgrades to reduce post-purchase dissonance and

consequently to prevent cancelations. Change of the location of accommodation far from the crisis can help to reduce tourists' perceived hazard loss. Upgrade to a luxury accommodation far from the crisis can help to reduce perceived psychological or financial loss. In addition, the accommodation approach would be most effective if directed at Accommodation Seekers segment found in this study. Therefore, accommodation upgrade can best prevent cancelations if offered to tourists living in regional areas intending to travel with their partner or spouse.

Some crisis situations may not affect tourist accommodation infrastructure. If – based on an assessment of the situation – change of accommodation seems a costly unnecessary action, managers of a destination hit by a crisis can best counteract cancelations by providing detailed updated information on developments. Instead of "battening down the hatches" in times of crises, effective communication and free flow of information is required (Seeger, 2006, p. 241). Mansfeld (1996) emphasizes on the use of the most effective communication tool to convey information regarding risk factors. The results of the current study show that tourists rely more on information communicated through travel agents compared to media. Alliances with travel agents – especially in source markets – and making travel agents more aware of the situation at the destination will enhance their confidence to retain current bookings and continue selling trips to the destination (Beirman, 2003). In addition to direct dissemination of information to travel agents, they can indirectly be informed through e.g. destination updated websites. In addition to travel agents, effective communication with other travel organizations – such as airlines and tour operators – can be used.

Although the current study finds media being a less reliable crisis information source compared to travel agents, information communicated through media will still impact tourists' perceptions of a destination (Hall & O'Sullivan, 1996). Maintaining good media relations therefore appears vital to limiting the damage to the destination image. Social media has become a popular way of communicating in times of crises (Schroeder, Pennington-Gray, Donohoe & Kiousis, 2013). Social media overcome the temporal, geographical and distribution constraints during a crisis and can be used for disseminating timely crisis-related updates continuously (Sigala, 2011). Destination managers can use social media to communicate instructing information (how to protect oneself from crisis) as well as adjusting information (help to cope psychologically with the crisis) with tourists (Coombs & Holladay, 2008). In addition to destination managers, residents of the affected destination can share their eye-witnessed news, photos, and videos with tourists on social media. Another important strategic avenue for applying the information approach is targeting the segment of information seekers found in this study. Thus updated information should be directed particularly at people living in metropolitan areas and tourists intending to travel alone through media – most importantly the Daily Telegraph newspaper.

The results of the current study indicate provision of safety solutions as the least important compared to the accommodation and information approach aggregately for all kind of crises. Safety solutions are found more important in a political instability compared to the other two kinds of crises under study. Safety is a significant human need dominantly affecting behavior (Maslow, 1954). Feeling safe is an important tourist motivation to undertake a trip. The majority of respondents in our sample indicated the motivational item of "to feel safe" as important when undertaking a trip. It is, therefore, essential to cater this very basic human need and to make tourists

feel safe prior and during their vacations (Kozak, Crotts & Law, 2007). Providing safety solutions can help to reduce tourists' safety concerns following an unexpected critical event at their planned destination and to prevent likely cancelations.

Various safety solutions have been introduced and successfully adopted by destinations to diminish the occurrence of security incidents at tourist destinations such as increased presence of armed police, surveillance by experienced security guards and security devices (UNWTO, 1996; Sönmez, Apostolopoulos & Tarlow, 1999; Law, 2006). The results of the current study indicate that the provision of personal (or group) security guard is preferred to the provision of personal safety device that allows signaling an emergency to call for help. The results also show that safety and security solutions are most effective if offered to the segment of Safety Seekers including tourists living in rural areas intending to travel with friends or with an organized group through media – most importantly state TV channels.

This study is limited by the number of crisis situations and the number of prevention approaches tested in the conjoint model. Different crises and different approaches could have led to different results. The current study did not account for the fact that the threat of an earthquake is more local compared to terrorism and political instability. In addition, the cancelation questions in this study are hypothetical in order to accommodate different crisis situations. Future research can be performed using field tests to investigate the effectiveness of different prevention actions in real crisis situations. For example, different prevention actions can be offered e.g. by travel agents to tourists who request a cancelation following a crisis at the destination of their choice and see how different actions affect their decision to cancel. Note, however, that field studies would not permit a range of crisis events to be measured

simultaneously in a realistic manner. Future – probably qualitative – research could also usefully explore what tourists perceive as cancelations, whether – for them – it is indeed as black and white as abandoning or not or whether they have a more nuanced view which may open up other possible responses.

This study investigated the effectiveness of prevention actions for tourists traveling with non-business purposes. Future research might also explore trips with business purposes. People who normally visit or conduct business belong to the 'Waverers' (or fair weather friends) category among post-crisis categories defined by Beirman (2003). This category is the first to return after a crisis, unlike the 'Disaffected' category including people who see the destination as a holiday destination. In addition, this study used a specific sample and results may be different in other contexts for other tourists segments. The effectiveness of different prevention approaches may also vary from one destination to another, so this study can be repeated for different destinations in different geographical regions.

Acknowledgements

The authors thank Jim Whyte for support through the Jim Whyte Fellowship Scheme which enabled Yasemin Boztuğ to spend some time at The University of Queensland to work on this project. The authors also thank the Australian Research Council for support under grants DP110101347 (salary support) and DP120103352 (project support) and to Tim Coltman and Logi Karlsson who provided feedback on previous versions of the manuscript.

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Appendix: Survey questions

Socio-demographic variables

Are you…?

1. Male
2. Female

How old are you?

<14-130>
Prefer not to say

What is the highest level of education you have completed?

1. No formal education
2. Primary school
3. Secondary school
4. Technical/Vocational training or apprenticeship
5. University degree, undergraduate
6. University degree, postgraduate

Which of the following best describes your employment status?

1. Working full-time
2. Working part-time or casually
3. Unemployed but looking for work
4. Homemaker
5. Retired
6. Student
7. Other (please specify) _____

Which best describes the area where you live?

1. Metropolitan
2. Regional
3. Rural

Media questions

Which are your favorite TV channels? *Select as many as apply*.

1. ABC1
2. ABC2
3. ABC News 24
4. One
5. Nine
6. GEM
7. Go!
8. Seven
9. 7Two
10. 7mate

11. Ten
12. Eleven
13. SBS One
14. SBS Two
15. SBS 3
16. Fox8
17. Fox Sports 1
18. Fox Sports 2
19. Fox Sports 3
20. Lifestyle Channel
21. History Channel
22. National Geographic
23. SoHo
24. Discovery Channel
25. Foxtel Movies
26. BBC World News
27. Other _____

Which newspaper(s) do you read regularly? *Select as many as apply.*

1. Online news services
2. Herald Sun
3. The Daily Telegraph
4. The Courier-Mail
5. The Sydney Morning Herald
6. The West Australian
7. The Age
8. The Advertiser
9. The Australian
10. The Australian Financial Review
11. The Herald
12. The Mercury
13. The Gold Coast Bulletin
14. The Canberra Times
15. The Examiner
16. Townsville Bulletin
17. Northern Territory News
18. Other _____

Which are your favorite radio stations? *Select as many as apply.*

1. ABC Newsradio
2. ABC Radio National
3. ABC TripleJ
4. ABC Dig Music
5. 702 ABC Sydney
6. 774 ABC Melbourne
7. 612 ABC Brisbane
8. 720 ABC Perth
9. 891 ABC Adelaide
10. 666 ABC Canberra
11. Other _____

Psychographic variables

How well do the following statements describe your personality?

I see myself as someone who	Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly
a) is reserved	○	○	○	○	○
b) is generally trusting	○	○	○	○	○
c) tends to be lazy	○	○	○	○	○
d) is relaxed, handles stress well	○	○	○	○	○
e) has few artistic interests	○	○	○	○	○
f) is outgoing, sociable	○	○	○	○	○
g) tends to find fault with others	○	○	○	○	○
h) does a thorough job	○	○	○	○	○
i) gets nervous easily	○	○	○	○	○
j) has an active imagination	○	○	○	○	○

Which risks have you taken in the past?

	Never	Rarely	Quite often	Often	Very often
Recreational risks (e.g. rock-climbing, scuba diving)	○	○	○	○	○
Health risks (e.g. smoking, poor diet, high alcohol consumption)	○	○	○	○	○
Career risks (e.g. quitting a job without another to go to)	○	○	○	○	○
Financial risks (e.g. gambling, risky investments)	○	○	○	○	○
Safety risks (e.g. speeding)	○	○	○	○	○
Social risks (e.g. standing for election, publicly challenging a rule or decision)	○	○	○	○	○

Last holiday behaviors and motivations

How many months ago did you take your last personal holiday (for at least 4 nights, not for business) away from home? …….

Now please think about the last holiday you have taken. Remember, for the purpose of this study, a holiday means that you were away from home for at least 4 nights and it was not for business or employment reasons, but a personal holiday.

In which country and city did you spend your last vacation? …

Who did you travel with?

1. Alone
2. With partner / spouse
3. With partner / spouse and children
4. With friends
5. With an organized group

6. With family (parents, siblings, …)

Which type of accommodation did you stay at?

1. 4-star or 5-star hotel
2. 3-star, 2-star, 1-star or unstarred hotel
3. Bed & Breakfast
4. Holiday apartment
5. Private room
6. Camping site
7. Youth hostel
8. Stayed with friends / relatives
9. Other (please specify): ……

What was the purpose of your trip? *Select as many as apply.*

1. Leisure and recreation
2. Visiting friends
3. Visiting family
4. Health and medical care
5. Education and training
6. Business
7. Other _____

What was important to you for this holiday?

	Important	Not important	Not applicable
a) To rest and relax.	○	○	
b) Luxury and being spoilt.	○	○	
c) To do sports.	○	○	
d) Excitement, a challenge, a special experience.	○	○	
e) Not to exceed my planned budget for this holiday.	○	○	
f) A variety of fun and entertainment.	○	○	
g) Meeting new people.	○	○	
h) The health and beauty of my body.	○	○	
i) Many entertainment facilities.	○	○	
j) Not paying attention to prices and money.	○	○	
k) Learning about local people.	○	○	
l) An intense experience of nature.	○	○	
m) Cosiness and a familiar atmosphere.	○	○	
n) For everything to be organized so I do not have to worry about anything.	○	○	
o) Unspoilt nature and a natural landscape.	○	○	
p) Cultural offerings and sights.	○	○	
q) Change to my usual surroundings.	○	○	
r) A romantic atmosphere.	○	○	
s) Catering to my children's needs.	○	○	○
t) To feel safe.	○	○	

Conjoint design

Sample scenario: Terrorism crisis

Thinking about this last holiday, please imagine that – shortly before the start of your trip – you hear in the news that there was a terrorist bombing at the destination you are planning to travel to. Ten people were killed and more than 20 injured. The people responsible for the terrorist attack were shot at the scene and a major cleaning up effort is on the way.

You bought travel insurance and if – for whatever reason – you would need to cancel your trip, you would get 95% of all your expenses (e.g. airfare, accommodation cost etc.) refunded.

Now you will see nine possible ways in which managers of the tourist destination you are planning to visit can react to try to prevent you from canceling your travel booking.

Please select (1) one option that would have the highest likelihood of preventing you from canceling, and (2) one option that would have the lowest likelihood of preventing you from canceling.

Action taken by destination management :	**Highest likelihood of preventing me from canceling (choose 1)**	**Lowest likelihood of preventing me from canceling (choose 1)**
- Regular updates through your travel agent. - Upgrade to luxury accommodation far from the attack scene. - Provision of personal (or group) security guard so you can move around freely at the destination.	○	○
- Regular updates through your travel agent. - Change of accommodation far from the attack scene. - Provision of personal safety device that allows you to signal an emergency to call for help.	○	○
- Information about developments at the destination through the media. - Change of accommodation far from the attack scene. - Provision of personal (or group) security guard so you can move around freely at the destination.	○	○
- Information about developments at the destination through the media. - Upgrade to luxury accommodation far from the attack scene. - No personal safety solutions at the destination.	○	○
- Information about developments at the destination through the media. - No change of accommodation. - Provision of personal safety device that allows you to signal an emergency to call for help.	○	○
- No updates about the developments at the destination. - Upgrade to luxury accommodation far from the attack scene.	○	○

- Provision of personal safety device that allows you to signal an emergency to call for help.		
- Regular updates through your travel agent. - No change of accommodation. - No personal safety solutions at the destination.	○	○
- No updates about the developments at the destination. - Change of accommodation far from the attack scene. - No personal safety solutions at the destination.	○	○
- No updates about the developments at the destination. - No change of accommodation. - Provision of personal (or group) security guard so you can move around freely at the destination.	○	○

Of the remaining options, please again select (1) one option that would have the highest likelihood of preventing you from canceling, and (2) one option that would have the lowest likelihood of preventing you from canceling.

	Highest likelihood of preventing me from canceling (choose 1)	Lowest likelihood of preventing me from canceling (choose 1)
	○	○
	○	○
	○	○
	○	○
	○	○
	○	○
	○	○

Of the remaining options, please again select (1) the option that would have the highest likelihood of preventing you from canceling, and (2) the option that would have the lowest likelihood of preventing you from canceling.

	Highest likelihood of preventing me from canceling (choose 1)	Lowest likelihood of preventing me from canceling (choose 1)
	○	○
	○	○
	○	○
	○	○
	○	○

One last time, please select (1) the option that would have the highest likelihood of preventing you from canceling, and (2) the option that would have the lowest likelihood of preventing you from canceling.

	Highest likelihood of preventing me from canceling (choose 1)	Lowest likelihood of preventing me from canceling (choose 1)
	○	○
	○	○
	○	○

Below you will see the order in which you have currently placed the various ways in which destination management can react in order to try to prevent you from canceling. Remember you bought travel insurance and if – for whatever reason – you would need to cancel your trip you would get 95% of all your expenses (e.g. airfare, accommodation cost etc.) refunded

Please now indicate whether, in each of those situations, you would cancel or not cancel the trip.

Action taken by destination management	Would you ….
1st ranked alternative	○ cancel ○ not cancel
2nd ranked alternative	○ cancel ○ not cancel
3rd ranked alternative	○ cancel ○ not cancel
4th ranked alternative	○ cancel ○ not cancel
5th ranked alternative	○ cancel ○ not cancel
6th ranked alternative	○ cancel ○ not cancel
7th ranked alternative	○ cancel ○ not cancel
8th ranked alternative	○ cancel ○ not cancel
9th ranked alternative	○ cancel ○ not cancel

Chapter 6: Essay 4 - Residents Open their Homes to Tourists When Disaster Strikes

Hajibaba, H., Karlsson, L., & Dolnicar, S. (in press). Residents open their homes to tourists when disaster strikes. *Journal of Travel Research.* doi: 10.1177/0047287516677167

Contributor	Overall contribution
Homa Hajibaba	83%
Logi Karlsson	12%
Sara Dolnicar	5%

Empirical Research Articles

Residents Open Their Homes to Tourists When Disaster Strikes

Journal of Travel Research
1–14

DOI: 10.1177/0047287516677167
jtr.sagepub.com
SAGE

Homa Hajibaba[1], Logi Karlsson[2], and Sara Dolnicar[3]

Abstract

Residents are key stakeholders of tourism destinations. Yet, to date, no study has investigated if and how residents can contribute to destination recovery when a disaster hits. The emergence of peer-to-peer networks offers an efficient platform for residents to open their homes to displaced tourists. Such help is particularly critical if key tourist infrastructure is severely damaged. But are residents willing to open their homes and help in other ways? The present study adopts a scenario-based survey research design, including Australians who live in tourism regions and Australian tourists. Results indicate that (1) segments of residents willing to support the tourism industry in disaster situations exist, and (2) tourists are willing to accept residents' offers of support. The more immediate the emergency, the higher the willingness to help and accept help. These insights point to the potential of involving residents in destination recovery efforts.

Keywords

natural disasters, residents, sharing economy, peer-to-peer networks, collaborative consumption, crisis management

Article available online at:

http://jtr.sagepub.com/content/early/2016/11/16/0047287516677167.abstract

Abstract

Residents are key stakeholders of tourism destinations. Yet, to date, no study has investigated if and how residents can contribute to destination recovery when a disaster hits. The emergence of peer-to-peer networks offers an efficient platform for residents to open their homes to displaced tourists. Such help is particularly critical if key tourist infrastructure is severely damaged. But are residents willing to open their homes and help in other ways? The present study adopts a scenario-based survey research design, including Australians who live in tourism regions and Australian tourists. Results indicate that (1) segments of residents willing to support the tourism industry in disaster situations exist, and (2) tourists are willing to accept residents' offers of support. The more immediate the emergency, the higher the willingness to help and accept help. These insights point to the potential of involving residents in destination recovery efforts.

Introduction

Natural disasters pose a constant threat to tourism destinations. Unexpected disasters have the potential to cause significant damage to infrastructure and disrupt tourist flows. The disruption of tourist flows leads to loss of tourism revenue which many regions heavily rely upon. In Nepal, for example, tourism contributed 8.9% to the 2014 GDP (World Travel and Tourism Council, 2015). The April 2015 earthquake hit Nepal's tourism industry hard. Many tourist accommodations were completely or partially damaged, 90% of international trips were cancelled immediately after the earthquake and a further 40% drop in international arrivals was forecast for the 12 months following the disaster (Government of Nepal, 2015).

The negative impacts of disasters on tourism destinations occur at two points in time: at the emergency stage immediately after the disaster hits and at the destination recovery stage, which sometimes can take years as in the case of the 2011 Christchurch earthquake which caused a 73% drop in international guest nights in the Canterbury region and was partially due to a 40-50% decrease in the number of available beds (Orchiston, Prayag, & Brown, 2016; Wilson, 2016).

Studies which have investigated how to best manage such situations (Ritchie, 2009; Sönmez, Apostolopoulos, & Tarlow, 1999) assume the existence of a disaster management plan where professionals take clearly specified roles. However, relying solely on professional disaster relief staff and commercial infrastructure is limiting, especially when the damage to infrastructure is substantial.

The present study investigates the potential of involving residents in the emergency response and the long-term rebuilding process. The involvement of residents has not

been the subject of a systematic investigation, possibly due to the lack of an effective "activation mechanism". The emergence of peer-to-peer networks offers such a mechanism. Peer-to-peer networks, such as Airbnb, enable quick distribution of accommodation capacity and other services. Residents can become tourist accommodation providers by listing their properties online. Because residents are making available existing housing, peer-to-peer accommodation networks can scale their supply to meet increased demand at virtually no cost and much faster than hotels. Evidence of peer-to-peer networks activating current hosts to help in the provision of accommodation during disasters already exists (Airbnb, 2016).

The present study investigates:

(1) the potential of involving residents in the emergency response and long-term rebuilding process of tourist destinations after a disaster hits, and

(2) tourists' willingness to accept the support offered by residents.

The knowledge gained from this study adds to both the crisis literature and the emergency literature (George, 2008; Robinson & Jarvie, 2008). Findings are also of immediate value to the tourism industry which can develop novel approaches to disaster management and recovery. This study does not aim to develop a comprehensive conceptual model of resident assistance, rather it aims to assess whether this new avenue of involving residents in tourism recovery efforts at the destination is an avenue worth pursuing.

The potential role of residents in destination recovery

The occurrence of natural disasters at tourism destinations can lead to substantial damage to tourist accommodation. Lack of alternative accommodation forces tourists

to cancel their trip (Orchiston, Prayag, & Brown, 2016). ‘Tent hotels’ were an immediate response to the destruction of hotels in Arugam Bay (Sri Lanka) following the Asian tsunami (Robinson & Jarvie, 2008). Camping tents were used to accommodate visitors arriving for the surf season. Tents solved the immediate problem, but were not suitable for the longer recovery period following the natural disaster.

Natural disasters not only damage the infrastructure, they also negatively impact tourists’ perceptions of safety at the destination (Sönmez & Graefe, 1998). Such negative perceptions decrease the likelihood of tourists travelling to disaster-stricken destinations (Sönmez & Graefe, 1998). Following a disaster, both tourists at the destination and tourists about to travel to the destination need reassurance of safety (Law, 2006). Tourists also need updates on disaster developments to feel confident to travel (Beirman, 2003; Ritchie, 2009). Hajibaba, Boztuğ, and Dolnicar (2016) identify three approaches that can be used to reduce cancelations: the provision of alternative accommodation, the provision of updates, and safety measures.

Carlsen and Liburd (2008) emphasize the need to identify the role of different tourism stakeholders in rebuilding tourist destinations. During a disaster, tourists are more vulnerable than residents because they are unfamiliar with the environment (Burby & Wagner, 1996). Helsloot and Ruitenberg (2004) challenge the myth that residents panic in a disaster situation, instead arguing that most residents act rationally in such situations. Helsloot and Ruitenberg (2004) suggest to consider involving residents during and after a disaster in the provision of rescue, shelter and care.

Stallings and Quarantelli (1985, p. 94) emphasize the importance of emergent groups ("groups of citizens that emerge around perceived needs or problems associated with both natural and technological disaster situations"). Resident participation and involvement in the community is fundamental for creation of resilient communities which, in turn, improves disaster readiness and recovery (Norris et al., 2008). According to Stallings and Quarantelli (1985), emergent citizen groups in a crisis have to turn into organized groups of citizens and be linked to emergency management organizations. Help from residents can occur both during and after disasters (Helsloot & Ruitenberg, 2004; Stallings & Quarantelli, 1985), but exactly how is unclear from the crisis literature.

New distribution channels enable residents' involvement in all three aspects of destination recovery: provision of accommodation, safety and information. Peer-to-peer accommodation networks can be used by residents to share their homes with tourists. Peer-to-peer accommodation networks are part of the sharing economy. The sharing economy is the peer-to-peer activity of obtaining, giving, or sharing the access to goods and services through community-based online services (Hamari, Sjöklint, & Ukkonen, 2016). Other terms used for the sharing economy include collaborative consumption and peer economy.

As opposed to the traditional tourism accommodation sector (which involves tourists renting rooms from professional businesses), peer-to-peer accommodation networks provide an online marketplace that coordinates rental of spaces between ordinary people (Guttentag, 2015). Airbnb is the most prominent peer-to-peer accommodation network On Airbnb people who are willing to rent out space take pictures of their space and post them online, along with a detailed description of the property, a price

and a booking calendar. Tourists are able to browse all the spaces available for rent on the peer-to-peer accommodation site, send inquiries and book online. Trust is central to peer-to-peer accommodation networks. Therefore, both the person renting out space and the person renting space need to be signed up with the networks. Being signed up means that the profiles of people involved in a transaction are visible to the other party, along with reviews they have received both in their role as guest and in their role as hosts. The peer-to-peer accommodation network handles payments and charges a commission. One of the unique selling propositions of peer-to-peer accommodation networks is the higher level of authenticity experienced by tourists. Note, however, that this is not an aspect the present study focuses on because the context of the study is that of serious emergencies. Authenticity is not of primary concern in this context.

Another way in which residents can help is by helping tourists travel around the destination if public transport is not operating. Peer-to-peer transportation networks allow residents to provide transportation to tourists using their personal vehicles. Peer-to-peer transport uses GPS-based apps, facilitating a real-time connection between residents and tourists looking for a ride (Copenhagen Economics, 2015).

Finally, residents can also assist by providing information to tourists. Social media can facilitate peer-to-peer information sharing in disaster situations (Pennington-Gray, Kaplanidou, & Schroeder, 2013). Residents can use social media to share eyewitness reports. Tourists might trust disaster information sources differently. It is therefore important to investigate the level of tourists' trust in information from residents.

Factors driving residents' willingness to help

Residents can support tourism destinations in crisis by sharing their available resources, such as their homes or information, with tourists. Belk (2007, p. 127) defines sharing as "the act and process of distributing what is ours to others for their use." Sharing which occurs among people known to one another, like family members and friends, is referred to as "sharing in" (Belk, 2010). Sharing between strangers is referred to as "sharing out" (Belk, 2010).

Sharing out available resources with tourists in an emergency situation following a disaster or during the recovery phase from such a disaster is behavior which is intended and benefits other, so it can also be seen as a form of helping. Helping is defined as an intended act that is beneficial to another (Batson & Shaw, 1991).

Helsloot and Ruitenberg (2004) argue that in times of crisis residents are willing to help not only their family and friends but also others. Therefore, it can be hypothesized that residents would be willing to help tourists in disaster situations by sharing out their available resources.

Several theories can be used in an attempt to explain residents' helping and sharing behavior in disaster situations. According to social exchange theory, the costs and benefits of an exchange affect individuals' evaluation of that exchange (Ap, 1992). Therefore, it can be assumed that residents who benefit from tourism will be more willing to offer help. Alternatively, economic benefits, such as earnings from sharing their home with tourists, can drive residents to offer help (Karlsson & Dolnicar, 2016).

Belk (2010) argues that the kind of sharing which involves exchange and reciprocity is not true sharing; rather it represents collaborative consumption which is defined as "people coordinating the acquisition and distribution of a resource for a fee or other compensation" (Belk, 2014, p. 1597). True sharing does not involve compensation, but love and caring (Belk, 2010). This is in line with the empathy-altruism model by Batson and Shaw (1991) which postulates an altruistic path to helping. Witnessing others' suffering arouses empathy. Empathic emotions evoke altruism and willingness to help the person for whom empathy is felt (Batson & Shaw, 1991). Therefore, empathy and altruism potentially explain residents' support in disasters.

Another motivation for sharing – which has come up in the literature on peer-to-peer accommodation networks – is possessing unused resources (Tussyadiah & Pesonen, 2015). It can be assumed, therefore that residents who have guest facilities at their home will be more likely to make accommodation available to tourists. Sense of community is another sharing motivator (Belk, 2007). Place attachment is closely related to one's sense of community and is found to motivate residents to protect, improve and revitalize their communities (Manzo & Perkins, 2006). It can be assumed that place attachment affect residents' sharing and helping behavior in disaster situations.

Some personality traits such as extroversion also influence helping behavior (Smith & Nelson, 1975). Vollhardt and Staub (2011) find people who suffered from a natural disaster are more likely to help. Residents' personality and past experience of disasters can also be hypothesized to affect their helping behavior. According to Ouellette and Wood (1998), past behavior predicts future behavior. Those residents who have experience of sharing their home on accommodation sharing websites can

be assumed to be more likely to share their homes during disasters. The likelihood of residents sharing disaster information with tourists using social media can be assumed to be affected by their general social media use.

Factors driving tourists' acceptance of residents' offers

Some tourists are more crisis-resistant than others (Hajibaba et al., 2015). Therefore it can be hypothesized that at least a segment of tourists would follow through with their travel plans and accept the offer of support from residents in disaster situations. Hajibaba et al. (2015) identify crisis-resistant tourists as those tourists who are young and have a high willingness to take risks. Tourists' risk-taking and personality affect cancelation behavior in an earthquake crisis (Hajibaba & Dolnicar, 2015). It is reasonable to assume, therefore, that those same factors (age, risk-taking and personality) will also be associated with tourists' acceptance of residents' offers in times of crisis.

Heo (2016) attributes the popularity of the sharing economy to tourists' desire to connect with the locals. It can be assumed, therefore, that tourists traveling with the motivation of meeting people are also more likely to accept residents' offers of accommodation in times of crisis. Travel motivation is mainly linked to the question of why people travel and is an internal factor causing behavior (Larsen, Øgaard, & Brun, 2011). Travel motivations are hypothesized to influence tourists' acceptance of residents' offers of support.

Methodology

Two survey studies were conducted: one investigating residents' willingness to help, the other investigating tourists' willingness to accept help. In both cases a hypothetical scenario research design was adopted which relies on people's assessment of their own behavior in a situation they have not previously experienced. It would be preferable to implement measures in a number of locations where a disaster is expected to hit and then study the real uptake. But such an approach is practically not feasible, especially if each person is asked to assess measures during the emergency and the recovery period.

Resident study

Questionnaire and measurements

Data from 995 adult Australian residents living in areas highly dependent on tourism was collected by an online research panel company. The 20 areas most highly dependent on tourism were identified using statistics from Tourism Research Australia (2011); these regions are provided in the supplementary material. Adult respondents living in those postcodes were invited to complete the survey. No other restrictions or sampling quotas were imposed. The resulting sample reflected the census data from the Australian Bureau of Statistics well with the exception of age which is known to be higher in tourism dependent areas which are typically regional and regional coastal. Response bias was checked by comparing responses given by early and late respondents (Blair & Zinkhan, 2006). No major differences were detected that would indicate a response bias problem. Note, that it is not important in this study that the sample is representative of the geographical areas in which the

study was conducted because the aim is not to make precise statements about population percentages.

Study participants were asked to: “Please imagine that a natural disaster (such as a cyclone, a flood, or a bushfire) hits the area you live in. Your home is not affected but most of the tourist accommodations in your area are severely damaged.”

Study participants then indicated their willingness to share their home with displaced tourists at the destination during a natural disaster under three assumptions: (1) that tourists would pay the same price as in commercial tourist accommodation, (2) that tourists would pay a small fee to cover expenses, and (3) that tourists would pay nothing. Binary response options (Yes or No, coded as 1 or 0) were offered because these best reflect the construct under study (behavior). Behavior, ultimately, can only occur or not occur (Dolnicar & Grün 2007, 2009). Responses were summed up and used as a measure of willingness to provide accommodation at the emergency stage.

Next, study participants were asked to think about a longer time frame after the disaster hit: “Now please imagine after this natural disaster your local tourism industry is faced with accommodation shortage. The rebuilding is predicted to take up to one year and new tourists cannot be accommodated during this time. If nothing is done, this will lead to the closure of various local tourism businesses which would have major impact on economic flow to your region.”

Study participants again indicated their willingness to share their home with tourists at three price levels and the sum served as a measure of willingness to provide accommodation at the recovery stage.

Participants also indicated how likely they were to help local tourism industry by disseminating disaster related information to tourists through (1) sharing updates on

social media, (2) volunteering in an emergency call center, and (3) volunteering to distribute brochures with disaster information in key tourists areas to help promote safe travel in the destination. Participants were also asked how likely they were to help tourists with the safety aspect by: (1) helping tourists travel around the area if public transport is not operating, (2) picking tourists up from the airport if public transport is not operating, and (3) undertaking a first aid course (or other special training) to be prepared for tourists staying with them. Items were measured on a four-point scale ('very unlikely' = −2 to 'very likely' = +2). The general information provision score during disaster and safety provision score range from −6 to +6. For the information provision after the disaster, only the item 'using social media to share updates on the disaster' was used as the other two items are limited to the disaster emergency stage only.

Adding up the responses for each of the three sets of items is in line with the scoring recommendations by Rossiter (2002, 2011) who argues in his COARSE measurement theory that one question has to be asked for each object for composite objects. Three questions were therefore required to cover information sharing because it consists of three concrete objects: sharing information on social media, working in a call center, and handing out leaflets.

Finally, study participants were asked which types of tourists they would prefer to share their home with and the information channels they prefer to get disaster updates from. They were also asked if they benefit from the tourism industry. The general term "benefit" was deliberately used because not all residents have immediate financial benefits from tourism. While they may not work in tourism, their township might not exist without tourism. A number of additional constructs –

hypothesized to influence residents' support – were measured: past experience of disasters, personality, emotional empathy, place attachment, general social media use, availability of guest facilities, and currently being a host on accommodation sharing websites. Questionnaires are provided in the supplementary materials.

Personality was measured using Rammstedt and John's (2007) 10-item instrument which measures – with two items each – extraversion, agreeableness, conscientiousness, neuroticism and openness to experience offering answer options from 'strongly disagree' (−2) to 'strongly agree' (+2). Each personality dimension score ranges from −4 to +4. Emotional empathy was measured using the 20-item Basic Empathy Scale (Jolliffe & Farrington, 2006) with response options ranging from 'strongly disagree' (−2) to 'strongly agree' (+2). The empathy score ranges from −40 to +40.

Study participants provided responses to all questions regarding accommodation, information, and safety for both during and after the disaster. The advantages of this research design include: (1) segments of residents based on their response to the full set of six accommodation questions can be identified, (2) differences between their willingness to host during and after a crisis can be studied, (3) differences between the range of support activities residents are willing to offer for during and after a disaster can be studied, and (4) insight can be gained into the association of residents' characteristics with their offers of support at various stages of the disaster.

Data analysis

Accommodation sharing information was analyzed using descriptive statistics. Cluster analyses were calculated to gain insight into residents' patterns of offering help to tourists, separately for the emergency and the recovery stage. More insight

can be gained from two separate cluster analyses – rather than one joint analysis – because two segmentation solutions enable destinations to most effectively activate residents' support by knowing which residents are available to assist in which circumstances (immediate emergency or recovery period). Because the variables in the segmentation base are not equally scaled, they were standardized (Milligan and Cooper 1988). The size of the sample complies with minimum requirements for segmentation (Dolnicar et al., 2014; Dolnicar, Grün, & Leisch, 2016). Bootstrap stability across 100 bootstrap samples was used to select a number of segments between 2 and 10 using k-means (Dolnicar & Leisch, 2010). The four-segment solution emerged as very stable for both points in time. For the final analysis, k-means was calculated 100 times on the original data. The solution with the smallest within-cluster sums of squares was retained.

The following tests were used to test for differences at the 95% confidence level: Chi-square tests for categorical, Kruskal-Wallis rank-sum tests for metric and McNemar Chi-square tests for paired binary variables. P-values were corrected for multiple testing using Holm's (1979) procedure. Computations were performed using R (Leisch, 2006; R Development Core Team, 2015).

Tourist study

Questionnaire and measurements

Data was collected from 480 adult Australian residents who had undertaken at least one personal holiday (for at least 4 nights, not for business) in the past 12 months. A test of respondent IDs confirmed that there was no overlap between resident and tourist respondents. No sampling quotas were imposed. The only two limitations for tourists to participate in the study were that they had to be older than 18 and that they

had to comply with the travel requirement outlined above. Response bias was checked by comparing responses given by early and late respondents (Blair & Zinkhan, 2006). No major differences were detected.

Participants received the following instruction: "Please imagine that you are planning to visit a tourist destination in Australia next week. You hear in the news that a cyclone hit the destination you are planning to visit. The cyclone has caused some serious damage to buildings. It has also affected the normal operation of trains and buses at the destination. The local authorities at the destination state that the destination is safe to visit so you do not need to cancel your trip. Your accommodation is severely damaged, but nearby areas are not at all affected. You can get the accommodation cost refunded. You bought travel insurance and if – for whatever reason – you cancel your trip, you would get 95% of all other expenses refunded (e.g. airfare)."

They then indicated if they would travel as planned if they could stay in the home of residents far from the disaster (1) for the same price, (2) for a small fee to cover expenses, and (3) for free.

They were asked the same question about this second scenario: "What if you were already at the destination when the cyclone hit? The local authorities at the destination state that the destination and all main tourist attractions are safe to visit. So you do not need to cancel your trip. Your accommodations is severely damaged, but nearby areas are not at all affected. You can get the accommodation cost refunded. You bought travel insurance and if – for whatever reason – you cancel your trip, you would get 95% of your remaining expenses refunded (e.g. airfare)."

The overall acceptance of accommodation score ranges from 0 to 3 for the two points in time. Study participants indicated their level of trust in disaster updates from different information channels on a slider scale with endpoints labelled 'Not Trust' and 'Absolutely Trust'. The respondents only saw a slider scale, but their responses were recorded on a 100 point scale allowing a wide range of data analytic procedures to be used.

Additional potential explanatory variables collected were personality (Rammstedt & John, 2007) and risk taking (Nicholson et al., 2005). Risk taking was measured for recreation, health, career, finance, safety and social risk on a five-point scale from 'never' (0) to 'very often' (4).

This study is deliberately limited to Australian domestic tourism because including overseas travelers or offering scenarios including overseas travel would introduce a large number of additional factors that cannot be controlled for.

Study participants provided responses to all questions regarding accommodation, information, and safety for both during and after the disaster.

Data analysis

Acceptance of accommodation offers was analyzed using descriptive statistics. Two multiple linear regression analyses were performed to identify factors driving tourists' willingness to accept the accommodation offers during the emergency and the recovery period. Regression analysis was used in the tourist study because – as opposed to the resident study – only one dependent variable (acceptance of accommodation offers) was available. Measures of personality, risk-taking, age, travel experience, money spent during travel, and travel motivations served as the independent variables in this analysis. The final regression models only contain

variables – selected using backward elimination – which significantly reduce the variance explained by the fitted models when eliminated.

To test whether there were differences in how much tourists trust different sources of information, Friedman rank-sum tests (for repeated measured metric) and pairwise Wilcoxon rank-sum tests (for paired metric variables) were used.

Results

Willingness to help in disaster situations

During a disaster – in the emergency stage – most surveyed residents are willing to share their home with tourists. Table 1 shows seven different patterns of responses to the accommodation provision questions at different price levels during the emergency stage of a disaster. As can be seen in Table 1, 58% of study participants are willing to share their home with tourists irrespective of price levels (Answer pattern 1); 18% do not want to share their home regardless of price levels (Answer pattern 2); 24% are price sensitive.

Results for the recovery stage are also shown in Table 1: 19% are willing to share their home regardless of price (Answer pattern 1). This is a significantly lower willingness than that of 58% during a disaster emergency ($p=0.000$). Forty-three percent are not willing to share their home even if they could earn money (Answer pattern 2). This is a much a higher rate of refusal than in the immediate emergency situation. Overall, surveyed residents are more price sensitive at the recovery stage than in the immediate emergency stage.

Surveyed residents express a high willingness to help by providing safety (mean=0.61, range=−6 to +6) and updated disaster information (mean=1.07,

range=−6 to +6). Study participants display clear preferences in terms of the types of tourists they would welcome in their home. They prefer singles (mean=3.36) or couples (mean=3.28) over families (mean=4.11) and groups (mean=5.30) (p=0.000). They prefer older (mean=3.32) over younger tourists (mean=4.64) (p=0.000).

Table 1. Response patterns for accommodation provision (emergency and recovery stages)

	Would you be willing to share your home with tourists …			Emergency stage		Recovery stage	
Answer pattern	… if they **paid you the same** as a tourist accommodation would charge?	… if they **only paid you a small fee** to cover the cost of their stay?	… **without receiving any money** for your effort?	Frequency	%	Frequency	%
1	Yes	Yes	Yes	581	58%	186	19%
2	No	No	No	183	18%	428	43%
3	Yes	Yes	No	104	10%	165	16.5%
4	Yes	No	No	55	6%	191	19%
5	No	No	Yes	37	4%	10	1%
6	No	Yes	Yes	25	3%	4	0.5%
7	No	Yes	No	10	1%	11	1%
Total				995	100%	995	100%

Helping segments at the emergency stage

To identify people who are most willing to help at the emergency stage, cluster analysis was performed. Three variables (provision of accommodation, information and safety) served as the segmentation base. Figure 1 shows the profiles of the

resulting segments. The horizontal lines indicate the overall percentage of participants' willing to help with each of the three aspects of accommodation, information and safety. The horizontal bars indicate the percentage of segment members who are willing to help. Segments are characterized by comparing the horizontal lines (overall sample) with horizontal bars (segment). The bars are colored if the difference between the segment mean and the sample mean for the variable is at least half of the sample mean, or at least a tenth of the total maximum for that variable (Dolnicar and Leisch 2013).

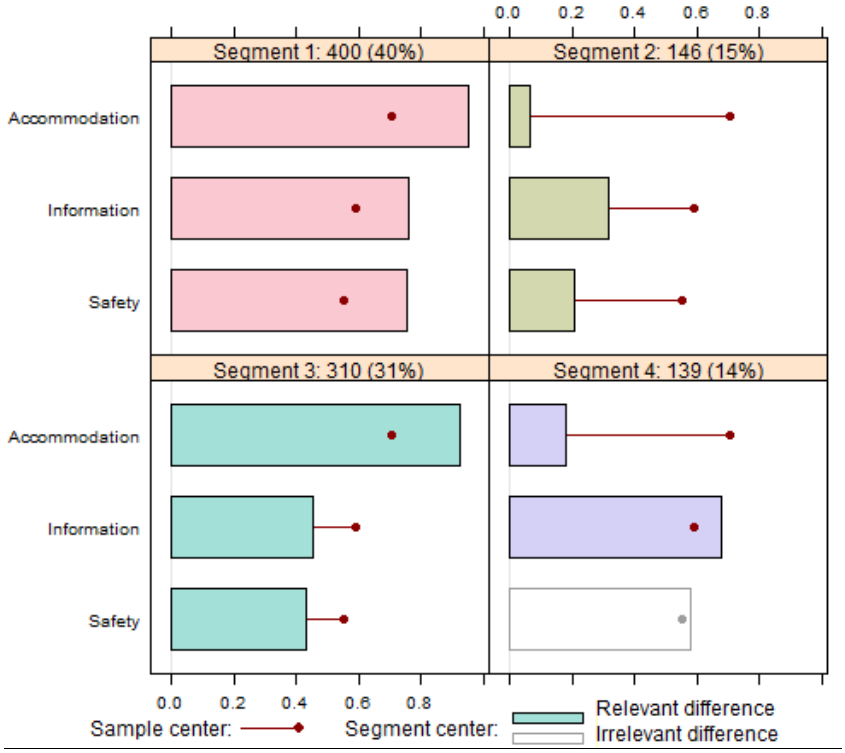

Figure 1. Profile of segments for the emergency stage

Members of segment 1 (n = 400) are most willing to help through providing accommodation, information and safety (Helpers). Segment 2 (n = 146) is not willing to help (Non-helpers). Segment 3 (n = 310) is willing to provide accommodation to

displaced tourists (Accommodation Providers), but not information and safety. Segment 4 (n = 139) is willing to provide information (Information Providers), but not accommodation and safety.

The segments differ significantly from each other (see Table 2): Helpers score highest (mean = 9.28) on empathy (p = 0.000). Of the Helpers 17% – a higher fraction than in the other segments – indicate that they benefit from the local tourism industry (p = 0.036). Also more Helpers (72%) indicate that the area they live in depends on tourism (p = 0.000), followed by Accommodation Providers (68%), Information Providers (68%) and Non-helpers (53%). These results confirm both egoistic (living in tourism dependent areas) and altruistic motivations (empathy) for helping.

Helpers score highest on extroversion (mean = 0.76, p = 0.000), agreeableness (mean = 1.79, p = 0.000), conscientiousness (mean = 2.34, p = 0.011) and openness to experience (mean = 0.88, p = 0.008). They score lowest on neuroticism (mean = 1.20, p = 0.000). More Helpers (50%) feel strongly attached to the region where they live (p = 0.018). These findings point to sense of community being associated with willingness to help.

Past experience of natural disasters is also significantly associated with segment membership (p = 0.011). More Non-helpers (62%) have never experienced a natural disaster. More Information Providers (22%) indicate that their area was not affected by a natural disaster but the areas close by were affected. More Helpers indicate that their area was affected with 30% not needing and 9% needing to evacuate.

Table 2. Profile of resident segments (emergency stage)

Variables	Segment 1: Helpers (n=400)	Segment 2: Non-helpers (n=146)	Segment 3: Accommodation Providers (n=310)	Segment 4: Information Providers (n=139)	p-value
Emotional empathy (mean)	9.27	6.61	7.11	9.16	.000
Personality (mean)					
… extroversion	0.76	-0.34	-0.11	-0.06	.000
… agreeableness	1.79	0.32	1.41	1.23	.000
… conscientiousness	2.34	2.10	1.92	2.09	.011
… neuroticism	-1.20	-0.27	-1.15	-0.75	.000
… openness to experience	0.88	0.40	0.54	0.88	.008
Place attachment					
… strong	50%	40%	37%	43%	
… moderate	40%	44%	49%	48%	.018
… weak	9%	12%	11%	7%	
… non-existent	1%	4%	3%	2%	
Do you and your family benefit from the local tourism industry? (Yes)	17%	9%	11%	13%	.036
Does the area you live in depend on tourism? (Yes)	72%	53%	68%	68%	.000
Past experience of natural disasters					
… no experience of natural disasters	44%	62%	46%	45%	
… my area was not affected but areas close by were affected.	17%	16%	21%	22%	
… my area was affected but did not evacuate my house.	30%	18%	28%	25%	.011
… my area was affected and did evacuate my house.	9%	4%	5%	8%	

Do you have a spare bedroom? (Yes)	82%	55%	79%	58%	.000
Do you have a guest bathroom? (Yes)	57%	39%	48%	40%	.000
Do you currently rent out the house you live in through any accommodation sharing websites (such as airbnb.com or stayz.com)? (Yes)	4%	1%	0%	3%	.008
Do you use social media (Facebook, Twitter, YouTube etc.)? (Yes)	85%	61%	67%	77%	.000
During this disaster, through which information channel would you prefer getting updates?					
… social media	51%	30%	30%	40%	.000
… mobile phone text messages	69%	43%	56%	58%	.000
… email	62%	45%	55%	56%	.006
… community website	31%	17%	19%	19%	.000

House structure is associated with willingness to accommodate tourists during a disaster. More Helpers (82%/57%) and Accommodation Providers (79%/48%) have a spare bedroom ($p = 0.000$) and a guest bathroom ($p = 0.000$) in their home, respectively. More Helpers (4%) currently rent out the house they live in through accommodation sharing websites ($p = 0.008$) and use social media (85%, $p = 0.000$). Thus, Helpers could be activated in an emergency situation through social media; their prior experience with house sharing will speed up offers of help. None of the Accommodation Providers currently rent out their house online, despite their willingness to share their house during a disaster.

Most Helpers (51%) prefer to get disaster updates through social media (p = 0.000), followed by Information Providers (40%). More members of the Helpers segment than any other segment prefer to get disaster updates through mobile phone text messages (69%, p = 0.000), email (62%, p = 0.006), and community websites (31%, p = 0.000). This information is of immediate practical value because it offers guidance to destination managers about how to most effectively distribute information to specific resident segments and how to best reach them when asking for their help in an emergency situation.

Helping segments at the recovery stage

Cluster analysis was performed to identify segments of people willing to help during the recovery period, using the same segmentation variables, but relating to the time after the disaster. Results are shown in Figure 2. Segment 1 (n = 231) is willing to provide accommodation, information and safety (Post-disaster Helpers). Segment 2 (n = 292) are Post-disaster Non-helpers. Segment 3 (n = 124) are Post-disaster Accommodation Providers and Segment 4 (n = 348) are Post-disaster Information Providers.

The post-disaster segments differ significantly from each other (see Table 3): post-disaster Information Providers score higher (mean = 9.99) on empathy (p = 0.000), followed by Post-disaster Helpers (mean = 8.20). A higher proportion of Post-disaster Accommodation Providers (77%) and Post-disaster Helpers (72%) indicate that the area they live in depends on tourism (p = 0.006).

Post-disaster Helpers and Accommodation Providers score higher on extroversion (mean = 0.60, 0.34) (p = 0.000), higher on agreeableness (mean = 1.77, 1.78) (p = 0.000) and lower on neuroticism (mean= −1.19, −1.45) (p=0.002), respectively.

More Post-disaster Accommodation Providers (86%, 61%) and Post-disaster Helpers (83%, 54%) have a spare bedroom (p = 0.000) and a guest bathroom (p = 0.005). More Post-disaster Accommodation Providers (4%) and Helpers (4%) rent out the house they live in on accommodation sharing websites (p = 0.015).

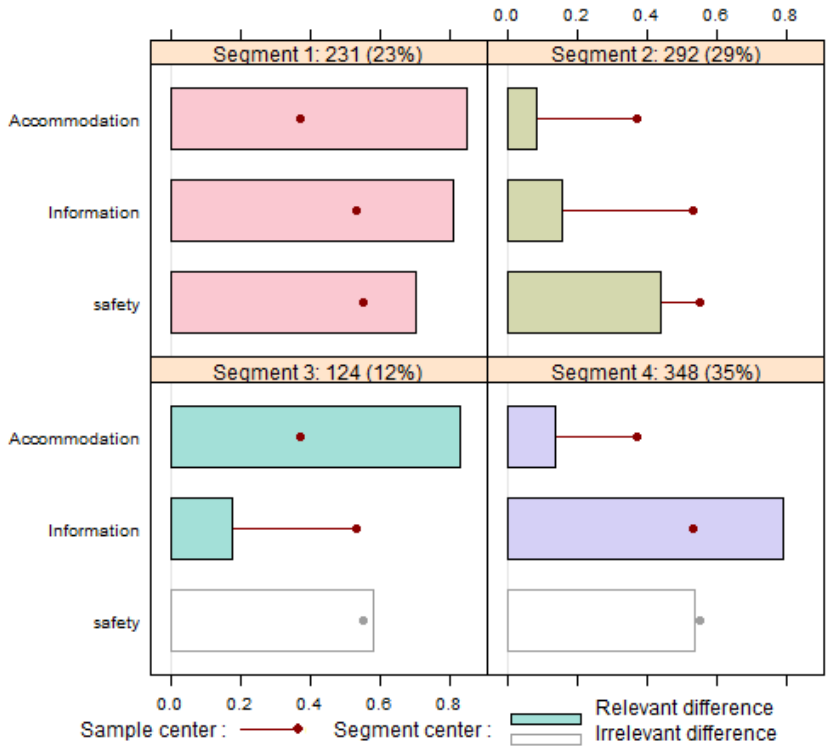

Figure 2. Profile of segments for the recovery stage

A higher proportion of Post-disaster Information Providers (96%) and Helpers (96%) use social media (p = 0.000). Post-disaster Information Providers (63%) are more likely to be female. Post-disaster Accommodation Providers (65%) are more likely to be male (p = 0.000). Non-helpers are significantly older (mean = 60); Helpers are younger (mean = 54, p = 0.000). A higher proportion of Post-disaster Helpers (62%) and Information Providers (60%) prefer disaster updates from social media (p = 0.000). More Post-disaster Helpers (64%) and Information Providers (64%) prefer

disaster updates via mobile phone text messages (p = 0.000), followed by Post-disaster Accommodation Providers (61%). More Post-disaster Helpers and Information Providers prefer disaster updates via community websites (29%, 27%, p = 0.001) and media websites (22%, 19%, p = 0.000).

Table 3. Profile of resident segments (recovery stage)

Variables	Segment 1: Post-disaster Helpers (n=231)	Segment 2: Post-disaster Non-helpers (n=292)	Segment 3: Post-disaster Accommodation Providers (n=124)	Segment 4: Post-disaster Information Providers (n=348)	p-value
Emotional empathy (mean)	8.20	6.48	7.14	9.99	.000
Personality (mean)					
… extroversion	0.60	-0.18	0.34	0.25	.000
… agreeableness	1.77	1.01	1.78	1.28	.000
… conscientiousness	2.15	2.13	2.05	2.16	.869
… neuroticism	-1.19	-0.80	-1.45	-0.84	.002
… openness to experience	0.72	0.54	0.78	0.80	.238
Does the area you live in depend on tourism? (Yes)	72%	61%	77%	67%	.006
Do you have a spare bedroom? (Yes)	83%	68%	86%	68%	.000
Do you have a guest bathroom? (Yes)	54%	46%	61%	45%	.005
Do you currently rent out the house you live in through any accommodation sharing websites (such as airbnb.com or stayz.com)? (Yes)	4%	1%	4%	0%	.015
Do you use social media (Facebook,	96%	45%	47%	96%	.000

Twitter, YouTube etc.)? (Yes)					
During this disaster, through which information channel would you prefer getting updates?					
… social media	62%	9%	15%	60%	.000
… mobile phone text messages	64%	49%	61%	64%	.000
… community website	29%	16%	19%	27%	.001
… media website	22%	9%	11%	19%	.000
Gender (female)	54%	46%	35%	63%	.000
Age (mean)	54	60	59	55	.000

Comparing segment membership during the acute emergency with segment membership in the recovery stage shows that 9% of Helpers during the acute emergency move to become Non-helpers in the recovery stage; 13% become Accommodation Providers, and 34% become Information Providers. A higher proportion of during disaster Helpers who move to Post-disaster Accommodation Providers (74%) and Non-helpers (69%) are male ($p = 0.000$); they are also older (mean = 63, $p = 0.000$). More of those staying in the Helpers segment after disaster (56%) and moving from Helpers during disaster to Post-disaster Information Providers (68%) are female; they are also younger (mean = 55).

One third of Non-helpers become Information Providers and one third of Information Providers become Non-helpers after the disaster. Of the Accommodation Providers during a disaster 37% become Post-disaster Non-helpers, 28% become Information Providers, and 13% become Helpers. Accommodation Providers during the disaster that become Post-disaster Non-helpers are older than others ($p = 0.004$).

Accepting help in disaster situations

Most surveyed respondents indicate that they would accept accommodation offers during the emergency stage. Thirty-four percent would stay with residents regardless of price in such a situation. Thirty-nine percent would not stay with residents, even if the accommodation were free. The remaining 27% are price sensitive. During the recovery stage, 46% would not stay with residents; 26% stay with residents regardless of price; 28% are price sensitive.

Overall, most study participants (68%) accept the accommodation offer at least in one of the six situations. Only 32% never accept the accommodation offer. Nineteen percent always accept the offer. Eight percent accept the offer during the emergency situation, but not at the destination recovery stage. Across all price conditions study participants are more willing to stay with residents during the emergency stage (61%) than during the destination recovery stage (54%) ($p = 0.000$). More are willing to stay with residents for free (58%) than at full commercial accommodation rate (54%) ($p = 0.000$).

In terms of trusting different information sources, the Friedman test indicates significant differences ($p = 0.000$) with the pairwise Wilcoxon rank-sum tests showing that all pairwise differences are significant ($p < 0.02$) except for the difference between media and hotel staff and media and travel agent. The rank order of people's trust is:

Family and friends > Residents > Local government > Tourists > Hotel staff ≥ Media ≥ Travel agent.

Study participants trust disaster-related information most when it comes from their family and friends at the destination (mean = 84). Residents are the second most

trustworthy source (mean = 69), followed by the local government at the destination (mean = 66) and other tourists (mean = 61). Study participants also indicate that they feel slightly safer (mean = 60) knowing that most residents at the destination agree to support them during a disaster.

The results of the regression analysis at the emergency stage (see Table 4) indicate that personality, risk taking, travel experience, and travel motivations are associated with acceptance of the accommodation offer at the emergency stage. The personality dimension of agreeableness positively affects ($p = 0.008$) and conscientiousness negatively affects ($p = 0.040$) acceptance of the accommodation offer. Accepting the accommodation offer and taking recreational ($p = 0.008$) and financial risks ($p = 0.003$) are significantly positively associated. Taking more domestic trips per year is also associated with higher acceptance of the offer ($p = 0.048$). Study participants who rate 'cultural offerings and sights' as important ($p = 0.006$) and 'luxury and being spoilt' as unimportant ($p = 0.007$) score higher on acceptance of the accommodation offer.

The regression analysis for the recovery stage (see Table 4) indicates that the acceptance of the accommodation offer is significantly associated with risk taking, age, travel behavior and motivations. It is positively associated with taking financial risks ($p = 0.003$). Younger people are more likely to accept the accommodation offer ($p = 0.003$). People who spend less money on a typical holiday – compared to most people they know – are more likely to accept the accommodation offer ($p = 0.023$). People who rate 'meeting new people' ($p = 0.000$) and 'coziness and a familiar atmosphere' ($p = 0.014$) as important and 'luxury and being spoilt' ($p = 0.006$) as unimportant score higher on the acceptance of accommodation offer.

Table 4. Summary of the final linear regression models (emergency and recovery stage)

Variables	Model 1: Emergency stage			Model 2: Recovery stage		
	Estimate	Std. Error	p-value	Estimate	Std. Error	p-value
Intercept	1.37	0.22	.000 *	1.08	0.27	.000*
Personality (mean)						
… agreeableness	0.10	0.04	.008 *	0.06	0.03	.074
… conscientiousness	-0.08	0.04	.040 *	- **	-	-
Risk taking						
… recreational risks (e.g. rock-climbing, scuba diving)	0.16	0.06	.008 *	-	-	-
… career risks (e.g. quitting a job without another to go to)	-0.12	0.06	.070	-	-	-
… financial risks (e.g. gambling, risky investments)	0.20	0.07	.003 *	0.19	0.06	.003 *
Age (mean)	-	-	-	-0.01	0.01	.003 *
How many holidays away from home (for at least 4 nights, not for business) do you usually take per year WITHIN your country of residence?	0.04	0.02	.048 *	-	-	-
Compared to most people you know, how much money do you spend on a typical annual holiday? (Ref: More than most people I know)						
… less than most people I know	-	-	-	0.38	0.17	.023 *
… same as most people I know	-	-	-	0.23	0.14	.094
What was important to you on your last holiday? (Ref: No)						
… luxury and being spoilt. (Yes)	-0.33	0.12	.007 *	-0.34	0.12	.006 *
… to do sports. (Yes)	-	-	-	-0.19	0.13	.161

… not to exceed my planned budget for this holiday.	0.24	0.013	.070	-	-	-
… meeting new people. (Yes)	-	-	-	0.42	0.12	.000 *
… coziness and a familiar atmosphere. (Yes)	0.21	0.13	.106	0.30	0.12	.014 *
… for everything to be organized so I do not have to worry about anything. (Yes)	-	-	-	0.23	0.12	.061
… unspoilt nature and a natural landscape	-0.22	0.15	.151	-	-	-
… cultural offerings and sights. (Yes)	0.40	0.14	.006 *	0.24	0.13	.074
… catering to children needs. (Yes)	-	-	-	0.23	0.13	.075
Explained variance: R^2	0.10			0.13		

* Significance at 0.05 level

** Each regression model contains variables selected in a backward elimination manner.

Conclusions, limitations and future work

This study set out to investigate the potential of residents' involvement in the recovery of tourism destinations following a disaster as well as during the immediate disaster emergency. The purpose was to determine the extent to which residents of a tourist destination are willing to support the destination following a disaster, and to identify those residents who are most willing to support and, therefore, have to be targeted and activated when required.

Results show that most study participants are willing to support the tourism industry during and after a disaster by sharing their homes, sharing information or providing safety. The size of the segments of Helpers and Accommodation Providers shrink from during to after the disaster. The segment of Information Providers, however, increases in size from 14% during to 31% after the disaster. One third of the

members of the Helpers, Accommodation Providers and Non-helpers segments during the disaster become Information Providers after the disaster. These findings point to an increased willingness to help when the need for shelter is urgent. During destination recovery, fewer will share their homes with tourists, but more will share information.

People who are supportive during and after a disaster have higher emotional empathy and live in areas where tourism is of critical importance. During the emergency stage, 6% of study participants share their home with tourists only if they get paid the same as a hotel would charge. This proportion increases to 19% for the recovery stage. On the other hand, some are willing to share their homes during and after disaster for free. These findings confirm both egoistic and empathetically evoked altruistic motivations (Batson & Shaw, 1991) for helping in disaster situations. People are more willing to get involved in true sharing – which involves caring – in an emergency situation. They are more likely to get involved in collaborative consumption – which involves an exchange – during the recovery stage.

Study participants who express a higher degree of willingness to support tourists share some common characteristics: they are more extroverted and agreeable and less neurotic with high sense of place attachment. Extraversion is associated with being sociable, talkative, and active; agreeableness is associated with being flexible, cooperative and tolerant; neuroticism is associated with being anxious, depressed and insecure (Barrick & Mount, 1991). Residents with a higher sense of community who are more sociable, talkative, flexible, cooperative, and emotionally stable represent the most promising targets among residents because they are more likely to support tourism industry in times of crises. The findings are consistent with previous research

which identifies place attachment to be associated with residents' motivation to protect and improve their communities (Manzo & Perkins 2006). The findings also support sense of community as a motivation for sharing (Belk, 2007).

Most of the supportive study participants are not currently using peer-to-peer accommodation websites. They do not share their homes with tourists under normal circumstances, but are willing to do so in times of crisis. Peer-to-peer accommodation websites can be used to activate these residents in disaster situations. Residents willing to provide accommodation in times of crises can be identified and signed up on peer-to-peer networks in advance of a disaster. When disasters strike, hosts in the affected area can be activated by sending automatic emails and asking if they are able to help.

In terms of the tourists: most study participants are willing to accept the offer to stay with residents. The acceptance rate is higher during the acute emergency than during the destination recovery. This finding is consistent with expectations, as tourists at destinations would be in immediate need of finding alternative accommodation.

People who are more willing to accept residents' accommodation offers are quite distinct. They are younger, less risk-averse budget tourists with travel motivations of meeting people and experiencing cultural offerings, and less motivated with luxury and being spoilt during their travel. These characteristics are in line with the characteristics of backpacker tourists (Larsen, Øgaard, and Brun 2011; Maoz 2007).

The characteristics of tourists willing to accept residents' offers identified in the present study are in agreement with previous studies which find age (Hajibaba et al., 2015), risk taking (Hajibaba & Dolnicar, 2015), travel experience (Lepp & Gibson, 2003) and travel motivations (Hajibaba & Dolnicar, 2015) are associated with

travelers' risk perceptions and their decision to cancel or not cancel a trip in times of crisis.

Results further show that people trust the information residents provide. Given how much trust people put in residents, it is important to encourage residents to share – recovery – information following a disaster. Information Providers are generally heavy users of social media. While they use traditional media to get disaster information, they also heavily use social media in disaster situations. Thus, they can be reached through social media and encouraged to share their eyewitness information, photos and videos. Social media are an effective disaster communication tool and an emergent form of public participation (Sigala, 2011). This study confirms the potential of social media in providing disaster updates by residents, a source that is highly trusted.

According to Ap (1992), residents contribute to the success or failure of the local tourism industry. Results from this study confirm these findings by identifying a new role for residents as key contributors to destination recovery following a disaster. If the tourism industry demonstrates the benefits residents receive from tourism in their communities, they will be supportive (McGehee & Andereck, 2004) even during extreme event circumstances.

Cheng (2016) and Heo (2016) discuss the impacts of the sharing economy on destination management. The current study points to the potential of the sharing economy to assist destinations in crisis. When in accommodation shortage, residents willing to share their homes can be activated by using the Airbnb network. When public transport is not working, those willing to help with transportation can be activated, for example, by using the Uber network. When it is critical to

communicate information to tourists, residents can be activated through social media. The sharing economy, therefore, provides a way to turn ‘emergent citizen groups’ in a crisis into ‘organized groups of citizens’ (Stallings & Quarantelli, 1985). It facilitates the contribution of residents to emergency and recovery efforts following a crisis and can be seen as a way towards building collaborative resilience in tourism destinations. Given that network structures are more effective than hierarchical systems in disaster emergency and recovery (Norris et al., 2008) crisis management plans should recognize, embrace and build on this capacity.

One limitation of this study is the specific scenario (cyclone) used. The nature of the disaster influences tourists’ cancelation behavior (Hajibaba & Dolnicar, 2016). A replication with a wider range of disasters would be useful. The hypothetical nature of the study itself also represents a limitation. Based on the proof of principle from the present study it is now possible to develop measures at destination the effectiveness of which could be empirically tested in future.

The current study is limited to Australia. Results are expected to generalize to other countries, but may differ across areas which differ in community trust. The study is also limited to domestic trips because the tourist sample contains Australians traveling to an Australian destination faced with a disaster. Extending the scope of the present study to including overseas travelers or offering scenarios including overseas travel would have introduced a large number of additional factors that cannot be controlled for. It would be interesting to replicate this study in the context of international tourism. Additionally, the residents under study live in areas highly reliant on tourism, which are most vulnerable to adverse effects of natural disasters on tourism. The present study did not aim to make precise statements about

population percentages. To know the precise population percentage for helping and accepting, the study would have to be repeated with a sample representative of the exact tourism destinations under study.

Using stated preferences – as opposed to revealed preferences – introduces another limitation to this study because respondents' choices in experimental conditions might differ in real situations. Stated responses of residents to the disaster questions can potentially be affected by social desirability bias. To keep this bias to a minimum, the questionnaire was pretested using a talk aloud protocol indicating that respondents did not feel socially obliged to express their willingness to make space available. The distribution of responses also points to social desirability not being a major problem with only 20% of respondents stating they would offer accommodation at no cost after the disaster. Nevertheless, it cannot be excluded that the overall level of stated willingness is elevated because of social desirability bias. This should not affect the comparative findings (across price levels and points in time) derived from this study.

Another limitation of the resident study is that one question was technically double barreled, as the reviewers rightly identified. The question referred to helping both tourists and the local tourism industry. Pretesting using a talk-aloud protocol did not point to respondents having difficulties, but it would have been preferable to word this question in a slightly different way.

Tourism literature has paid little attention to the issue of residents offering help to tourists and tourists accepting help by residents. With the sharing economy on the rise, this is an important area for future research. A number of factors potentially influencing residents' support could be studied which have not been included in the

present study: compassion (Weaver & Jin, 2016), past experience of hosting guests, frequency of general technical use, and safety concerns. It would be of great value if a comprehensive conceptual model of resident support in times of crisis could be developed. Additional factors potentially influencing tourists' willingness to stay with residents should also be studied in future research, including experience of facing with a disaster-stricken destination, accommodation preferences, and past experience of staying with residents.

Acknowledgements

We thank the Australian Research Council for support under grants DP110101347 (salary support) and DP120103352 (project support). We thank Tim Coltman and Dominik Ernst for their comments on previous version of this manuscript.

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Appendix: Survey questions

Resident survey

Sample of residents from the top 20 tourism regions by economic importance: Central Northern Territory, Phillip Island, Whitsundays, Snowy Mountains, West Coast Tasmania, East Coast Tasmania, Spa Country, Kangaroo Island, Tropical North Queensland, Lakes in Victoria, Mid North Coast, Upper Yarra, Central Murray, High Country, Australia's Coral Coast, Sunshine Coast, Outback QLD, Gold Coast, Western Vic, Northern Rivers.

During a disaster scenario

Please imagine that a natural disaster (such as a cyclone, a flood, or a bushfire) hits the area you live in. Your home is not affected but most of the tourist accommodations in your area are severely damaged.

Provision of accommodation during a disaster

Would you be willing to share your home with displaced tourists **during** the disaster – if they **paid you the same** as a tourist accommodation would charge?

- ❍ Yes
- ❍ No

Would you be willing to share your home with displaced tourists **during** the disaster – if they **only paid you a small fee** to cover the cost of their stay?

- ❍ Yes
- ❍ No

Would you be willing to share your home with displaced tourists **during** the disaster – **without receiving any money** for your effort?

- ❍ Yes
- ❍ No

After a disaster scenario

Now please imagine **after this natural disaster** your local tourism industry is faced with accommodation shortage. The rebuilding is predicted to take up to one year and new tourists cannot be accommodated during this time. If nothing is done, this will lead to the closure of various local tourism businesses which would have major impact on economic flow to your region.

Provision of accommodation after a disaster

Would you be willing to share your home with new tourists arriving **after** the disaster – during the rebuilding period – if they **paid you the same** as a tourist accommodation would charge?

- ❍ Yes
- ❍ No

Would you be willing to share your home with new tourists arriving **after** the disaster – during the rebuilding period – if they **only paid you a small fee** to cover the cost of their stay?

- ❍ Yes
- ❍ No

Would you be willing to share your home with new tourists arriving **after** the disaster – during the rebuilding period – **without receiving any money** for your effort?

- ❍ Yes
- ❍ No

Preference for tourist types

If you were helping out by sharing your home, who would you prefer to share your home with? Please drag and drop the options below to form your preferred ranking:

_____ A young tourist traveling alone

_____ An old tourist traveling alone

_____ A young couple

_____ An old couple

_____ A family traveling with children

_____ A group of young tourists

_____ A group of old tourists

Provision of information and safety

To help the local tourism industry during this disaster, how likely is it that you would …

	Very Unlikely	Unlikely	Likely	Very Likely
… help tourists travel around your area if public transport is not operating.	❍	❍	❍	❍
… pick tourists up from the airport if public transport is not operating.	❍	❍	❍	❍
… undertake a first aid course (or other special training) to be prepared for tourists staying with you.	❍	❍	❍	❍
… use social media to share updates on the disaster.	❍	❍	❍	❍
… do voluntary work in an emergency call centre.	❍	❍	❍	❍
… volunteer to distribute brochures with disaster information in areas which tourists frequently visit to help promote safe travel in the destination.	❍	❍	❍	❍

Disaster information channels

During this disaster, through which information channel would you prefer getting updates? Select as many as apply.

- ❑ TV
- ❑ Radio
- ❑ Newspapers
- ❑ Social media
- ❑ Mobile phone text messages
- ❑ Email
- ❑ Government website
- ❑ Community website
- ❑ Media website
- ❑ Other (please specify): _____

Socio-demographic questions

Are you ...?

- ❍ Female
- ❍ Male

How old are you?

- ❍ <14-130>

General social media use

Do you use social media (Facebook, Twitter, YouTube etc.)?

- ❍ Yes
- ❍ No

How do you use social media (Facebook, Twitter, YouTube etc.)?

	Yes	No
I use it to follow other people.	❍	❍
I share others' posts.	❍	❍
I generate info, photos etc.	❍	❍

How often do you use social media (Facebook, Twitter, YouTube etc.)?

- ❍ Multiple times in one day
- ❍ Once a day
- ❍ A few times a week
- ❍ Once a week
- ❍ Less than once a week

Past experience of natural disasters

Have you ever experienced a natural disaster (such as a cyclone, a flood, or a bushfire) where you live?

- ❍ Yes
- ❍ No

When you experienced this disaster, how did that affect your area?

- ❍ My area was affected.
- ❍ My area was not affected but areas close by were affected.

Did you have to evacuate your home?

- ❍ Yes
- ❍ No

Personality

How well do the following statements describe your personality?

I see myself as someone who ...

	Strongly disagree	Disagree a little	Neither agree nor disagree	Agree a little	Strongly agree
is reserved.	❍	❍	❍	❍	❍
is generally trusting.	❍	❍	❍	❍	❍
tends to be lazy.	❍	❍	❍	❍	❍
is relaxed, handles stress well.	❍	❍	❍	❍	❍
has few artistic interests.	❍	❍	❍	❍	❍
is outgoing, sociable.	❍	❍	❍	❍	❍
tends to find fault with others.	❍	❍	❍	❍	❍
does a thorough job.	❍	❍	❍	❍	❍
gets nervous easily.	❍	❍	❍	❍	❍
has an active imagination.	❍	❍	❍	❍	❍

Benefit from tourism

Do you and your family benefit from the local tourism industry?

- ❍ Yes
- ❍ No

Does the area you live in depend on tourism?

- ❍ Yes
- ❍ No

House facilities

Do you have a spare bedroom?

- ❍ Yes
- ❍ No

Do you have a guest bathroom?

- ❍ Yes
- ❍ No

Current rent of house on accommodation sharing websites

Do you currently rent out the house you live in through any accommodation sharing websites (such as airbnb.com or stayz.com)?

- ❍ Yes

❍ No

Place attachment

How strong is your feeling of belonging and attachment to the region you live in?

❍ Non-existent
❍ Weak
❍ Moderate
❍ Strong

Emotional empathy

Following is a list of statements that describe how people feel in different situations. For each statement, please indicate the extent to which you agree that it describes you.

	Strongly disagree	Moderately disagree	Neither agree nor disagree	Moderately agree	Strongly agree
My friends' emotions don't affect me much.	❍	❍	❍	❍	❍
After being with a friend who is sad about something, I usually feel sad.	❍	❍	❍	❍	❍
I can understand my friend's happiness when she/he does well at something.	❍	❍	❍	❍	❍
I get frightened when I watch characters in a good scary movie.	❍	❍	❍	❍	❍
I get caught up in other people's feelings easily.	❍	❍	❍	❍	❍
I find it hard to know when my friends are frightened.	❍	❍	❍	❍	❍
I don't become sad when I see other people crying.	❍	❍	❍	❍	❍
Other people's feelings don't bother me at all.	❍	❍	❍	❍	❍
When someone is feeling 'down' I can usually understand how they feel.	❍	❍	❍	❍	❍
I can usually work out when my friends are scared.	❍	❍	❍	❍	❍
I often become sad when watching sad things on TV or in films.	❍	❍	❍	❍	❍
I can often understand how people are feeling even before they tell me.	❍	❍	❍	❍	❍
Seeing a person who has been angered has no effect on my feelings.	❍	❍	❍	❍	❍

I can usually work out when people are cheerful.	❍	❍	❍	❍	❍
I tend to feel scared when I am with friends who are afraid.	❍	❍	❍	❍	❍
I can usually realize quickly when a friend is angry.	❍	❍	❍	❍	❍
I often get swept up in my friend's feelings.	❍	❍	❍	❍	❍
My friend's unhappiness doesn't make me feel anything.	❍	❍	❍	❍	❍
I am not usually aware of my friend's feelings.	❍	❍	❍	❍	❍
I have trouble figuring out when my friends are happy.	❍	❍	❍	❍	❍

Tourist survey

After a disaster scenario

Please imagine that you are planning to **visit a tourist destination in Australia next week**. You hear in the news that **a cyclone** hit the destination you are planning to visit. The cyclone has caused some serious damage to buildings. It has also affected the normal operation of trains and buses at the destination. The local authorities at the destination state that the destination is safe to visit so you do not need to cancel your trip. **Your accommodation is severely damaged**, but nearby areas are not at all affected. You can get the accommodation cost refunded.

You bought travel insurance and if – for whatever reason – you cancel your trip, you would get 95% of all other expenses refunded (e.g. airfare).

Acceptance of accommodation after a disaster

If you could stay in the home of residents far from the disaster **for the same price** as your previous booking, would you travel as planned?

- ❍ Yes
- ❍ No

Would you travel as planned if you could stay far from the disaster in the home of residents **only for a small fee** to cover the cost of your stay?

- ❍ Yes
- ❍ No

If you could stay in the home of residents far from the disaster **for free**, would you travel as planned?

- ❍ Yes
- ❍ No

During a disaster scenario

What if you **were already at the destination** when the cyclone hit? The local authorities at the destination state that the destination and all main tourist attractions are safe to visit. So you do not need to cancel your trip. Your accommodation is severely damaged, but nearby areas are not at all affected. You can get the accommodation cost refunded. You bought travel insurance and if – for whatever reason – you cancel your trip, you would get 95% of your remaining expenses refunded (e.g. airfare).

Acceptance of accommodation during a disaster

If you could stay in the home of residents far from the disaster **for the same price** as your previous booking, would you stay at the destination?

- ❍ Yes
- ❍ No

If you could stay in the home of residents far from the disaster **only for a small fee** to cover the cost of your stay, would you stay at the destination?

- ❍ Yes
- ❍ No

If you could stay in the home of residents far from the disaster **for free**, would you stay at the destination?

- ❍ Yes
- ❍ No

Trust in disaster information channels

Think about the different information channels that could provide you with safety information during this disaster. Using the sliders provided, please indicate how much you would trust each of them.

_____ The local government at the destination
_____ Travel agency
_____ Hotel staff
_____ Residents
_____ Media
_____ Tourists
_____ Family and friends at the destination

Safety

If most residents at the destination agreed to support tourists during this disaster, would that make you feel safer?

- ❍ <0-100>

Socio-demographic questions

Are you ...?

- ❍ Female
- ❍ Male

How old are you?

- ❍ <14-130>

Personality

How well do the following statements describe your personality?

I see myself as someone who ...

	Strongly disagree	Disagree a little	Neither agree nor disagree	Agree a little	Strongly agree
is reserved.	❍	❍	❍	❍	❍
is generally trusting.	❍	❍	❍	❍	❍
tends to be lazy.	❍	❍	❍	❍	❍
is relaxed, handles stress well.	❍	❍	❍	❍	❍
has few artistic interests.	❍	❍	❍	❍	❍
is outgoing, sociable.	❍	❍	❍	❍	❍
tends to find fault with others.	❍	❍	❍	❍	❍
does a thorough job.	❍	❍	❍	❍	❍
gets nervous easily.	❍	❍	❍	❍	❍
has an active imagination.	❍	❍	❍	❍	❍

Risk taking

Which risks have you taken in the past?

	Never	Rarely	Quite often	Often	Very often
Recreational risks (e.g. rock-climbing, scuba diving)	❍	❍	❍	❍	❍
Health risks (e.g. smoking, poor diet, high alcohol consumption)	❍	❍	❍	❍	❍
Career risks (e.g. quitting a job without another to go to)	❍	❍	❍	❍	❍
Financial risks (e.g. gambling, risky investments)	❍	❍	❍	❍	❍
Safety risks (e.g. speeding)	❍	❍	❍	❍	❍
Social risks (e.g. standing for election, publicly challenging a rule or decision)	❍	❍	❍	❍	❍

General travel behavior

Compared to most people you know, how much **time** do you spend planning holidays?

- ❍ Less than most people I know
- ❍ Same as most people I know
- ❍ More than most people I know

Compared to most people you know, how much **money** do you spend on a typical annual holiday?

- ❍ Less than most people I know
- ❍ Same as most people I know
- ❍ More than most people I know

How many holidays away from home (for at least 4 nights, not for business) do you usually take per year WITHIN your country of residence?

❍ <0-30>

How many holidays away from home (for at least 4 nights, not for business) do you usually take per year OUTSIDE your country of residence?

❍ <0-30>

Past travel

How many months ago did you take your last personal holiday (for at least 4 nights, not for business) away from home?

❍ <1-24(or more)>

What was important to you on your last holiday?

	Not important	Somewhat important	Important
To rest and relax.	❍	❍	❍
Luxury and being spoilt.	❍	❍	❍
To do sports.	❍	❍	❍
Excitement, a challenge, a special experience.	❍	❍	❍
Not to exceed my planned budget for this holiday.	❍	❍	❍
A variety of fun and entertainment.	❍	❍	❍
Meeting new people.	❍	❍	❍
The health and beauty of my body.	❍	❍	❍
Many entertainment facilities.	❍	❍	❍
Not paying attention to prices and money.	❍	❍	❍
Learning about local people.	❍	❍	❍
An intense experience of nature.	❍	❍	❍
Cosiness and a familiar atmosphere.	❍	❍	❍
For everything to be organized so I do not have to worry about anything.	❍	❍	❍
Unspoilt nature and a natural landscape.	❍	❍	❍
Cultural offerings and sights.	❍	❍	❍
Change to my usual surroundings.	❍	❍	❍
A romantic atmosphere.	❍	❍	❍
Catering to children needs.	❍	❍	❍
To feel safe.	❍	❍	❍

Chapter 7: Conclusions, Limitations and Future Work

Conclusions

The overarching goal of this PhD thesis was to identify proactive demand-driven strategies which could be used to reduce the vulnerability of tourism destinations to crises. To achieve this goal, three research objectives were pursued: (1) to theoretically conceptualize and empirically test the existence of crisis-resistant tourists, (2) to understand the comparative stated effectiveness of alternative preventative measures across kinds of crises and tourists, and (3) to understand the role of residents in destination recovery.

Specifically, four research questions were investigated:

Research Question 1: Do crisis-resistant tourists exist? If so, how can tourism destinations target them? The results point to the existence of crisis-resistant tourists with distinct characteristics that can be used by destinations for targeting. A typical crisis-resistant tourist is young, full-time employed, interested in adventurous activities and uses social media to inform one's travel planning.

Research Question 2: What is tourists' advice on how to prevent them from canceling? In a qualitative setting, tourists revealed measures destinations can take to prevent them from canceling including guarantees of safety, up-to-date information, and upgrades of flight and accommodation.

Research Question 3: Does the stated effectiveness of preventative measures vary across kinds of crises and tourists? Results indicate that the stated effectiveness of different combinations of actions varies across kinds of crisis

and tourist. Destinations in crisis can take the most effective combinations of actions suitable to the kind of crisis and tourist.

Research Question 4: Would residents help with destination recovery? If so, would tourists accept offers of help from residents? Findings confirm that residents are willing to help in times of crisis and tourists are willing to accept residents' support.

Overall, results point to the potential of several strategies that could be used by destinations in crisis: (1) targeting crisis-resistant tourists, (2) employing effective cancelation prevention actions suitable to the kind of crisis and tourist, and (3) recognizing help from residents in both emergency and recovery stages of a crisis. The identified strategies can be incorporated at different stages of the framework for strategic management of tourism crises (Ritchie, 2004): 1) C*risis Prevention and Planning*, 2) S*trategic Implementation,* and 3) *Resolution, Evaluation and Feedback* (see Table 1).

Crisis Prevention and Planning. This stage of crisis management covers the pre-event and prodromal stages of a crisis. It involves developing strategies and plans to stop or limit the impacts of a tourism crisis (Ritchie, 2004).

Targeting crisis-resistant tourists – identified in the first study undertaken as part of this PhD research (Chapter 3) – is a proactive strategy capable of preventing or minimizing tourism crisis by decreasing demand drops following a crisis. The strategy of targeting crisis-resistant tourists is not limited to a specific context, destination, or kind of crisis.

Scenario analysis can be used at this stage of crisis management to think about the unfavorable situations that might arise and the prevention alternatives (Kash &

Darling, 1998). Appropriate strategies and actions have to be listed and the outcome of various strategies needs to be evaluated (Kash & Darling, 1998). For natural disasters, Ritchie (2004) suggests two types of proactive planning: risk analysis and hazard mapping where the history of natural disasters in the area and likelihood of reoccurrence is analyzed; and integrated emergency planning which includes creation of a disaster management command center and coordination between emergency services and tourism authorities.

Findings (Chapters 4 and 5) confirm the potential of strategies including change of accommodation, provision of disaster updates, and provision of safety to reduce cancelations (Beirman, 2003; Kozak et al., 2007; Law, 2006; Mansfeld, 1999). The effectiveness of these strategies varies across kinds of crises. Destinations can employ effective combination of strategies depending on the kind of crisis (Roselius, 1971). To facilitate *strategic implementation*, it is important – at the *crisis prevention and planning* stage – to understand the type of crisis destinations are susceptible to (Ritchie, 2004) and plan specific actions to be taken in each type of crisis. If, for example, the destination is vulnerable to earthquakes, the outcome of different combinations of actions (including various channels of information dissemination, various safety measures, etc.) can be evaluated. The effectiveness of cancelation prevention measures depends on the type of crisis and on the type of tourists. Therefore, the identified actions have to be directed at the most suitable segments of tourists.

Residents are willing to help and tourists are willing to accept residents' offers of support and go ahead with their travel plans. At the *prevention and planning* stage, destinations can identify and communicate with supportive residents. Networks of

supportive residents – who are willing to help with different aspects in times of crisis – can be established at this stage of crisis management to be activated when required. Peer-to-peer networks can be used to establish networks of residents willing to open their homes to tourists, give tourists a ride, and share disaster updates. Integrated emergency planning can include coordinating and linking not only tourism authorities and emergency services but also networks of supportive residents.

The peer-to-peer accommodation network Airbnb already uses its networks to contribute to emergency response efforts. When a disaster strikes, Airbnb emails hosts in the affected area asking them if they can host people in need (Airbnb, 2016). Airbnb networks can be used not only for asking residents to host other residents, but also for asking residents to host tourists during both the emergency and recovery stages of a disaster. Other peer-to-peer networks including transportation networks and social media networks can also support tourism crisis management. Findings (Chapter 6) can be used to target supportive residents who can help destinations in several ways in emergency and recovery stages of a tourism crisis.

Strategic Implementation. The strategic implementation stage of crisis management covers prodromal, emergency, intermediate, long term or recovery stages of a crisis (Ritchie, 2004). When it is apparent that a crisis is about to hit (prodromal phase of a crisis), strategies and procedures developed at the prevention and planning stage can be implemented to stop or minimize the impacts of crisis.

At the *strategic implementation* stage of crisis management, the combination of actions – identified in the *crisis prevention and planning* stage – suitable to the type of crisis hit can be taken by destinations. A combination of actions including change of accommodation to a luxury accommodation away from crisis (Beirman, 2003;

Pizam, 1999), provision of information on development through travel agent (Fuchs & Reichel, 2011), and provision of personal security guard (Kozak et al., 2007; Law, 2006) emerged as the most effective combination in all three crisis types of terrorism, earthquake, and political instability (Chapter 5). Destinations in crisis can provide the most effective actions available to them.

Ritchie emphasizes collaboration of stakeholders at the *strategic implementation* stage. Residents are among the key tourism stakeholders. Destinations can rely on residents' help for crisis management activities (George, 2007; Robinson & Jarvie, 2008). During the emergency stage of a crisis, the established network of residents willing to provide accommodation, information, and safety during emergency can be activated. After the emergency stage, networks of residents willing to help during the recovery stage can be activated to provide needed resources.

According to Quarantelli (1988) effective crisis management involves the development and use of tactics suitable to the specific situational contingencies during an emergency. Activation of networks of supportive residents is a good integration of crisis and emergency management plans. Community coordination and collaboration supported with advanced technologies (e.g. the Internet, GPS) are emphasized for managing an emergency (Kapucu, 2008; Quarantelli, 1988; Ritchie, 2004).

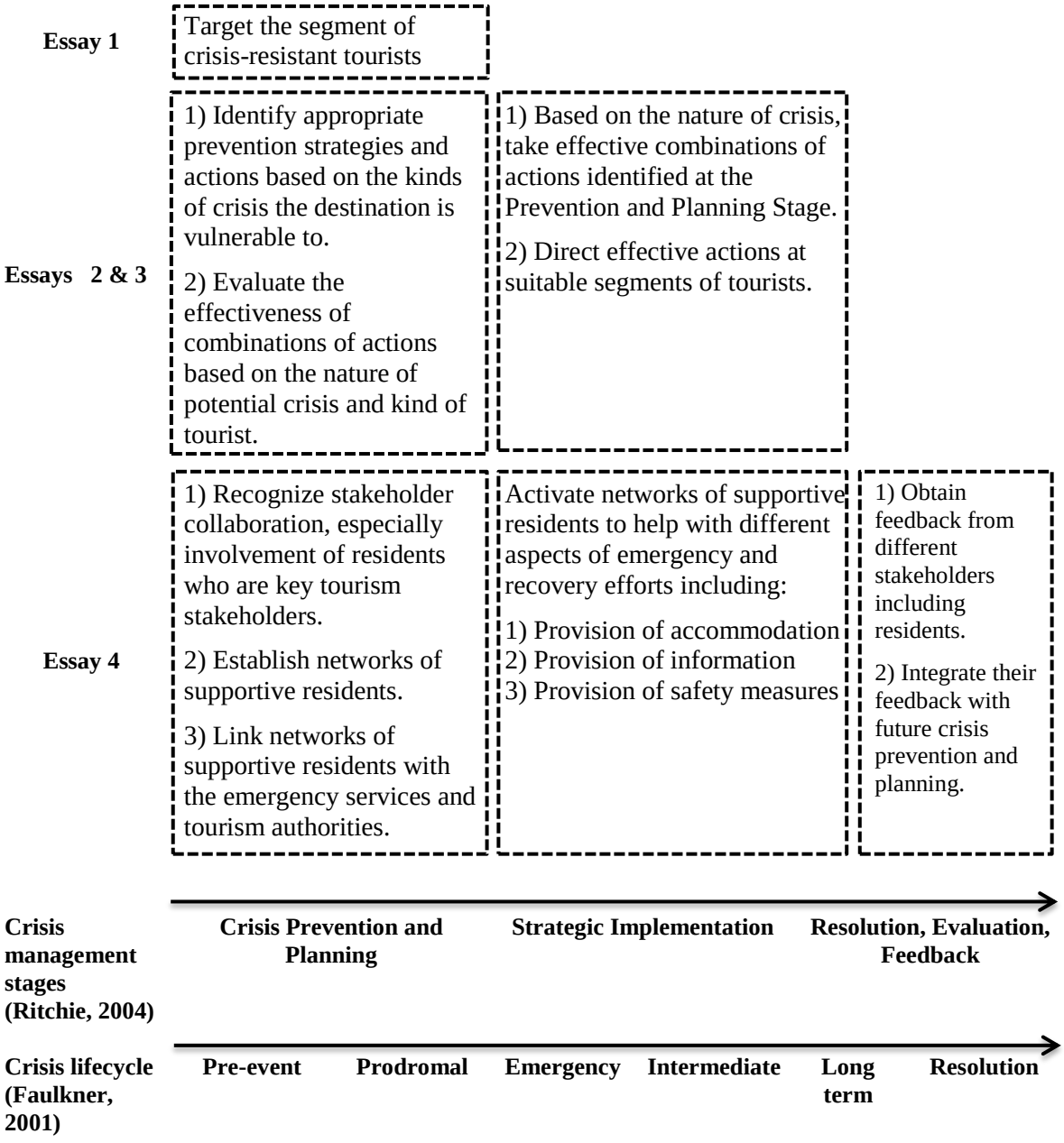
Social media facilitates resident engagement and volunteerism during the emergency stage of a crisis (Sigala, 2011). By using social media to share images, texts, and tweets, residents can become part of a large response network rather than being mere bystanders (Merchant, Elmer, & Lurie, 2011). The information shared by the network of supportive residents on social media can help tourists who are at the

destination during crisis. It can also help emergency management organizations to better respond by providing updates on developments which they can act upon.

Activating residents willing to provide accommodation during an emergency helps emergency management to provide cost-effective emergency housing (Smith, Ramos, & Desouza, 2016). Peer-to-peer accommodation networks such as Airbnb can activate those residents committed to opening their homes to displaced tourists. Provision of accommodation by residents in times of crisis presents a high-speed economically sustainable solution because of reducing the need for heavy resource expenditure in buildings and infrastructure (Johnson, 2009).

***Resolution, Evaluation and Feedback*.** The final stage of crisis management begins with recovery from the crisis (Ritchie, 2004). Evaluation, feedback, learning and modification of strategies for future prevention and planning happen at this stage (Ritchie, 2004). Different stakeholders, especially those directly involved in the emergency and recovery efforts, can provide feedback on the suitability of actions taken, how those actions can be improved, and can suggest new ways for modification of strategies and actions. Residents involved in crisis management efforts are an invaluable source of feedback. With the large number of residents involved even a small change proposed by each resident can result in huge collaborative learning and modification of actions.

Table 1. Incorporation of key findings in different stages of tourism crisis management



Limitations

The studies conducted as part of this PhD thesis have some limitations. One limitation is the use of hypothetical research settings which rely on self-report measures of behavior. In a hypothetical research setting, the researcher creates a situation with the desired conditions and manipulates some variables while controlling others (Iacobucci & Churchill, 2010). The researcher is then able to measure the effect of manipulating the independent variable(s) on the dependent variable while holding other variables constant or minimizing their effects (Iacobucci & Churchill, 2010).

The use of hypothetical scenarios is an established experimental practice (Jackson, Keith, & Burdick, 1984; Maxham, 2001; Puto, Patton Iii, & King, 1985). The main criticism of hypothetical designs is lack of external validity. External validity deals with the issue of generalizability of findings to other populations, settings, etc. (Winer, 1999). A hypothetical setting calls attention to specific factors which makes people more conscious about those factors compared to when they are deciding in a natural setting (Malhotra, 2010). The discrepancies between stated behavior in a hypothetical setting and real behavior in a natural setting is, therefore, a common cause for concern (Bradley, 1988; Winer, 1999).

Lynch (1999), however, argues that findings from single real-world settings are not more likely to generalize than those from single laboratory settings. Lynch (1999) opposes conducting field studies that sacrifice internal validity in an attempt to maximize external validity. Hypothetical settings allow more complex designs than field experiments (Malhotra, 2010). Researchers can control for more variables in a hypothetical setting. For example, the hypothetical setting in Chapters 4 and 5

allowed the inclusion and comparison of several crisis types which is not possible in a field study. A field study would have required setting up the infrastructure for the tested interventions in a number of locations where a disaster is expected to hit and then study the real uptake of the dependent measures. Such an approach is not feasible because it is impossible to predict where what kind of disasters will hit. It would also be extremely expensive to set interventions up in a number of locations and extremely time-consuming to collect such data. Because the advantages of hypothetical setting outweigh the disadvantages for the research questions investigated in this PhD research, hypothetical settings were used.

Another limitation is the use of online surveys. Despite many advantages such as fast response, low cost, and enabling complex and dynamic instruments, online surveys potentially create self-selection biases (Hwang & Fesenmaier, 2004). Self-selection biases can be coverage errors (which result from using a non-representative sample) or non-response errors (which occur when the invited sample is representative but only a non-representative subsample responds) (Dolnicar, Laesser, & Matus, 2008). Coverage errors were avoided because most Internet panel companies recruit members using a wide range of recruitment avenues and keep their panel representative of the national population (Dolnicar et al., 2008). Non-response errors were avoided because Internet panel companies also control the subsample and provide a representative subsample of respondents.

Future work

Influencing tourists' behavior in times of crisis requires an understanding of how negative emotions, thoughts, and perceptions develop (Sönmez & Graefe, 1998a).

Research employing qualitative approaches to understand tourists' underling emotions and feeling when faced with a crisis at their destination is lacking. Future research is needed to conduct a longitudinal study of tourists' emotions, feelings, and opinions when they first hear about the crisis at their destination and later on until they make the decision to either continue with, change, or cancel travel plans. Qualitative research in form of unstructured interviews with tourists who face a crisis at their destination can well capture tourists' emotions, opinions and decision making.

To date, most demand-side tourism crisis management studies have focused on risk perceptions and travel intentions (Floyd, Gibson, Pennington-Gray, & Thapa, 2004; Sharifpour, Walters, Ritchie, & Winter, 2014; Walters et al., 2015). Less attention has been paid to tourists' actual behavior. Ultimately, tourists' behavior – whether they cancel or not – is critical for destinations in crisis struggling with demand drops. More effort should be put into the study of actual behavior, rather than stated intentions, when actual behavior is of interest (Dolnicar & Ring, 2014).

Prior research is limited to specific crisis contexts (Prideaux et al., 2008; Walters et al., 2015) which does not allow generalizability of findings. Further systematic research focusing on a broad range of crisis contexts would allow identification of differences among management of crises of different nature. Hajibaba and Dolnicar (2016) find that tourists' reactions vary across kinds of crisis. The occurrence of a terrorist attack, an earthquake, and pandemics at the destination results in a higher number of stated trip cancelations compared to political instability, crime, and financial crisis (Hajibaba & Dolnicar, 2016). Understanding how emotions, thoughts, and concerns provoked by a terrorist attack (Sönmez & Graefe, 1998b) are different

from those of a natural disaster, disease outbreak, political instability, crime, and financial crisis can help develop emotionally engaging communication messages suitable to the kind of crisis. Effective communication messages have the potential to influence tourists' behavior and decision making. Future research can design and test communication messages (Sturges, 1994) enabling development of influential messages suitable to the kind of crisis.

Research developing creative ways of tourism crisis management is lacking. The focus of most tourism crisis management studies has been on tourists and tourism organizations and officials. Broadening the focus of future research to other stakeholders could lead to identification of novel ways of tourism crisis management. Residents are important tourism stakeholders and can support tourism industry in extreme circumstances. Understanding emotions and opinions of residents of disaster-stricken destinations would help determine new ways residents are able and willing to contribute to crisis management efforts.

Realizing the potential of emerging technologies such as peer-to-peer networks is another way towards identifying new crisis management strategies (Mizrachi & Fuchs, 2016). Emerging technologies can facilitate effective communication of different stakeholders in times of crisis. In what other ways can technology assist destination emergency and recovery management? Given the importance of network structure in promoting destination resilience (Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008), exploring what and how effective networks can be established is of great importance.

In 2016, the frequency of political crises hitting tourism destinations increased significantly. As a result, tourism destinations such as Turkey and France

experienced critical downturns in tourist numbers (Reuters, 2016). The growing number of critical events such as terrorist attacks and political turmoil calls for development of innovative crisis management strategies. All in all, there is an increasing need for developing solutions that lead to untroubled peaceful travel experience for tourists which can result in reliable source of income for communities that critically depend on tourism.

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Appendix

Statement of contribution

Paper	Research design	Data analysis	Writing the manuscript
1. Hajibaba, H., Gretzel, U., Leisch, F., & Dolnicar, S. (2015). Crisis-resistant tourists. *Annals of Tourism Research, 53,* 46-60.			
Homa Hajibaba	20%	95%	70%
Ulrike Gretzel	20%	-	15%
Friedrich Leisch	-	5%	5%
Sara Dolnicar	60%	-	10%
2. Hajibaba, H., & Dolnicar, S. (under review). Tourists' advice on how to prevent them from canceling. (Research Note)			
Homa Hajibaba	50%	100%	95%
Sara Dolnicar	50%	-	5%
3. Hajibaba, H., Boztuğ, Y., & Dolnicar, S. (2016). Preventing tourists from canceling in times of crises. *Annals of Tourism Research, 60,* 48-62.			
Homa Hajibaba	60%	50%	90%
Yasemin Boztuğ	20%	50%	5%
Sara Dolnicar	20%	-	5%
4. Hajibaba, H., Karlsson, L., & Dolnicar, S. (in press). Residents open their homes to tourists when disaster strikes. *Journal of Travel Research.* Doi: 10.1177/0047287516677167			
Homa Hajibaba	60%	100%	90%
Logi Karlsson	30%	-	5%
Sara Dolnicar	10%	-	5%

Homa Hajibaba	Prof Sara Dolnicar	Prof Tim Coltman	Dr Matthew Pepper	Dr Pi-Hsuan Monica Chien